BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 14.12.94 Test oil : ISO 4113 Combination No. : 0402648933 Injection pump Pump designation : PE8P12OA320LS7847-3 EP type number : 0412628886 Governor Governer design. : RQ300/950PA1031-14 Governer no. : 0421801720 Cust. part No. : 0230742702 Customer-spec, information Customer : MB-NFZ Motor : 0M402 LA : 280.0 Power KW TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar : Tolerance bar 0.1 Tolerance 1/h : + 10.0 Test nozzle holde assembly : 1688901105 Opening pressure 208.5 Tolerance bar : +- 1.5

: 1409918004

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Test lines
                : 1680750075
 Outside diameter :
                        8.0
x inside diameter:
                        3.0
 x length mm : 1000
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +-
Prestroke mm
Tolerance mm
test only
                 : ← 0.10
Rack travel in mm: 20.50
                : +- 0.50
Tolerance mm
                : 8-7-2-6-3
:-5-4-1
Firing order
Phasing
                : 0-45-90-135-180
                 : -225-270-315
                 : +- 0.30
Tolerance
Check
tolerance °NW
                 : + - 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm :
                     550
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Lube oil

		→ guide sleeve
Rack travel in m Tolerance mm	nm: 14.80 : +- 0.05	travel mm : 6.13 Tolerance mm : +- 0.10
Del. quantity		+ Rated speed rpm : 443 + guide sleeve
cm3/1000 strokes	: 239.0	travel mm : 4.35
Tolerance cm3/1000 strokes	: + 1.0	Rated speed rpm : 550
Check tolerance cm3/1000S.	: +- 4.0	guide sleeve travel mm : 6.00 Tolerance mm : + 0.10
Spreed Tolerance cm3/1000 strokes	: 6.0	Rated speed rpm : 1160 guide sleeve travel mm : 11.50
Check tolerance		Tolerance mm : +- 0.50
cm3/1000s.	: 9.0	+ Rated speed rpm : 835 + guide sleeve
2nd speed rpm	: 300	travel mm : 6.38 Tolerance mm : +- 0.10
Rack travel in m Tolerance mm	m : 5.70 : ← 0.30	†
Del. quantity cm3/1000 strokes	: 13.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes		Rated speed rpm : 600
Check tolerance cm3/1900s.		Rack travel in mm : 20.00
Spreed	: ← 6.0	Tolerance mm : + 0.80
TALABARA		L
Tolerance cm3/1000 strokes	: 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	: 6.0 : 10.0	+
cm3/1000 strokes Check tolerance		Rated speed rpm : 550 Aneroid pressure
cm3/1000 strokes Check tolerance	: 10.0	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity
cm3/1000 strokes Check tolerance cm3/1000S.	: 10.0	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance
cm3/1000 strokes Check tolerance cm3/1000S.	: 10.0 WECTION PUMP	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV	: 10.0 WECTION PUMP	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	: 10.0 NJECTION PUMP /EL : 300 : 1.62	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
cm3/1000 strokes Check tolerance cm3/1000S. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : + 0.10 : 1009	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : + 0.10 : 1009 : 6.84 : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : ← 0.10 : 1009 : 6.84 : ← 0.10 : 950 : 950 : 6.50	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 10.0 NJECTION PUMP /EL : 300 : 1.62 : + 0.10 : 1009 : 6.84 : + 0.10 : 950 : 6.50 : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 97.0

A02

Tolerance 1/min	: +- 8	+	SETTING	
rack travel mm Rated speed rpm Tolerance 1/min	: 1085 : +- 15	‡ ‡	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1200 : 14.80 : +- 0.05
rack travel mm Tolerance mm Rated speed rpm		‡	MEASUREMENT Pressure hPa	
LOW IDLE		 ‡	Rated speed rpm rack travel mm Tolerance mm	: 400 : 10.60 : ← 0.20
control lever position degree		+	Rated speed rpm	
tolerance degree Testing:	: +- 4.0	† †	Pressure hPa rack travel mm Tolerance mm	: 300 : 11.90 : +- 0.15
Rated speed rpm rack travel mm Tolerance mm	: 3.50 : ← 0.10	+	Pressure hPa rack travel mm Tolerance mm	: 12.90
rack travel mm Rated speed rpm Tolerance 1/min	: 350	+	START CUT-OUT	
Rated speed rpm	: 200	+ 1	Rated speed rpm Check	
CRT mm min.	: > 5.50	+ !	speed 1/min Rated speed rpm Check	: < 220
TORQUE CONTROL			speed 1/min	: < 240
Rated speed rpm rack travel mm Tolerance mm	: 14.80	‡ ,	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: 14.00	+ F	hPa Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.10 : ← 0.10	+ 0	Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: +- 2.0 : +- 5.0
Rated speed rpm rack travel mm Tolerance mm	: 14.25	+ 7	Spreed Folerance cm3/1000 strokes Check tolerance	: 8.0
Rated speed rpm rack travel mm Tolerance mm		+ c	cm3/1000s. Aneroid pressure APA Rated speed rpm	: 12.0 : - : 400
ANEROID/ALTITUDE COMPENSATOR TEST		† c	Del. quantity cm3/1000 strokes olerance	
		‡ c	:m3/1000 strokes	: +- 1.0

Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance

cm3/1000 strokes 8.0 Check tolerance cm3/1000s. 12.0

BREAKAWAY

Rack travel in mm : 13.00 Rated speed rpm : 998 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance

cm3/1000 strokes : \leftarrow 15.0 Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 5.70 rack travel mm Toterance mm 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.06.94 : ISO 4113

Combination No.

: 0402648938

Injection pump

Pump designation : PE8P120A320LS7840

: -10

EP type number

: 0412628856

Governor

Governer design. : RQ300/1050PA1030-15

Governer no.

: 0421801736

Cust. part No.

: 0230743602

Customer-spec. information Customer

: MB-NFZ

Motor

: 0M442 A

Power KW

: 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar

Tolerance bar

Test nozzle holde

assembly

: 1688901105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Lube oil

: 1409918004

Test lines : 1680750075

A05

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.25 Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance Check

: + - 0.30

tolerance °NW

: + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm :

13.45

Tolerance mm

: +- 0.05

Dol quantity	1
Del. quantity cm3/1000 strokes : 212.0	+ guide sleeve + travel mm : 4.46 + Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 510
Check tolerance : + 4.0	f guide sleeve travel mm : 6.00 Tolerance mm : +- 0.10
Spreed	Rated speed rpm : 1270 guide sleeve
cm3/1000 strokes : 6.0	travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 873 guide sleeve
2nd speed rpm : 300	travel mm : 6.26 Tolerance mm : + 0.10
Rack travel in mm : 6.50 - Tolerance mm : +- 0.30 -	
Del. quantity cm3/1000 strokes : 13.0	GUIDE SLEEVE POSITION
Tolerance	Rated speed rpm : 600
cm3/1000 strokes : +- 3.0 Check tolerance	
cm3/1000s. : +- 6.0 Spreed	- Rack travel in mm : 20.00 - Tolerance mm : +- 0.80
Tolerance	
cm3/1000 strokes : 8.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 12.0	Rated speed rpm : 700 Aneroid pressure
(P) SETTING OF THIS COTTON OF THE	- hPa : 750
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Del. quantity cm3/1000 strokes : 212.0
	- Tolerance - cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVEL	- Check tolerance - cm3/1000s. : +- 4.0
Rated speed rpm : 300 guide sleeve	- Spreed - Tolerance
travel mm : 1.82	- cm3/1000 strokes : 6.0
Tolerance mm : + 0.10	- Check tolerance
Rated speed rpm : 1103 guide sleeve	- cm3/1000s. : 9.0
travel mm : 6.71	RATED SPEED
Tolerance mm : + 0.10	
Rated speed rpm : 1050 guide sleeve	control lever 102.0
travel mm : 6.35	tolerance degree : + 4.0
Tolerance mm : + 0.10	
Rated speed rpm : 811	rack travel mm : 11.80 Rated speed rpm : 1098
guide sleeve + 6.09 +	Tolerance 1/min : + 8
Tolerance mm : + 0.10	rack travel mm : 4.00
Rated speed rpm : 411	Rated speed rpm : 1185 Tolerance 1/min : +- 15
A06	_
AUV	

rack travel mm Tolerance mm Rated speed rpm	: + 0.50	‡	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 11.15
LOW IDLE			Rated speed rpm	: 400
control lever position degree tolerance degree Testing:	: ← 4.0	+	Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 11.60 : + 0.10 : 400 : 12.40
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.50 : + 0.10	†	START CUT-OUT	
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 400	†	Rated speed rpm Check speed 1/min Rated speed rpm Check	
Rated speed rpm	: 200	1	speed 1/min	: < 240
CRT mm min.	: > 8.80	‡	FUEL DELIVERY CHA	ARACTERISTICS
TORQUE CONTROL		 ‡	Aneroid pressure	: 750
Rated speed rpm rack travel mm Tolerance mm	: 13.45	Ī	Rated speed rpm Del. quantity cm3/1000 strokes	: 1050
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.80 : + 0.10	‡	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0
Rated speed rpm rack travel mm Tolerance mm		‡	Spreed Tolerance cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm	: 800 : 13,45	<u> </u>	cm3/1000S. Aneroid pressure	: 12.0
Tolerance mm	: +- 0.05		hPa Rated speed rpm Del. quantity	: - : 500
ANEROID/ALTITUDE COMPENSATOR TEST		ŧ	cm3/1000 strokes Tolerance cm3/1000 strokes	
SETTING		Ŧ	Check tolerance cm3/1000s.	: + 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 750 : 13.45 : + 0.05	+	Spreed Tolerance cm3/1000 strokes Check tolerance	
MEASUREMENT		‡	cm3/1000s. BREAKAWAY	: 12.0

A07

Rack travel in mm : 11.80
Rated speed rpm : 1098
Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 200.0 Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 300 rack travel mm 6.50 Tolerance mm 0.30 Del. quantity cm3/1000 strokes 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 : +--Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 01.08.94 Test oil : ISO 4113 Combination No. : 0402648945B Injection pump Pump designation: PE8P120A320LS7847-3 EP type number : 0412628886 Governor Governer design. : RQ300/1050PA1030-10 Governer no. : 0421801718 Cust. part No. : 0230747802 Customer-spec. information : MB-NFZ Customer Motor : 0M402 LA Power KW : 280.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar Tolerance bar : +- 0.1 Tolerance L/h : +- 10.0 Test nozzle holde assembly : 1688901105 Opening pressure bar 208.5 Tolerance bar : +- 1.5

: 1409918004

Test lines : 1680750075 Outside diameter : 8.0 x inside diameter : x Length mm : 1000 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : +-Prestroke mm 5.55 : + - 0.05Tolerance mm test only : + 0.10 Rack travel in mm: 20.50 : + 0.50 Tolerance mm : 8-7-2-6-3 :-5-4-1 Firing order Phasing : 0-45-90-135-180 : -225-270-315 Tolerance : **←** 0.30 Check tolerance °NW : +- 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 8 BASIC SETTING Rated speed rpm : 550

Lube oil

Rack travel in m Tolerance mm	m: 14.40 :+- 0.05	travel mm : 6.08 Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes	: 226.0	Rated speed rpm : 414 guide sleeve
Tolerance cm3/1000 strokes	: + 1.0	travel mm : 3.88 Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 550 guide sleeve travel mm : 6.00
Spreed		
Tolerance cm3/1000 strokes	: 6.0	+ Rated speed rpm : 1270 + guide sleeve - travel mm : 11.50
Check tolerance cm3/1000s.	: 9.0	Tolerance mm : +- 0.50
2nd speed rpm	: 300	+ Rated speed rpm : 847 + guide sleeve + travel mm : 6.23
Rack travel in mn Tolerance mm	m: 5.70 : +- 0.30	Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes Tolerance	: 13.0	GUIDE SLEEVE POSITION
cm3/1000 strokes Check tolerance		Rated speed rpm : 600
cm3/1000s. Spreed Tolerance	: + 6.0	+ Rack travel in mm : 20.00 + Tolerance mm : + 0.80
cm3/1000 strokes Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 10.0	Rated speed rpm : 550 Aneroid pressure
(B) SETTING OF IN WITH GOVERNOR	NECTION PUMP	+ hPa : 1200 + Del. quantity
GUIDE SLEEVE TRAV		- cm3/1000 strokes : 226.0 - Tolerance - cm3/1000 strokes : +- 1.0
Rated speed rpm guide sleeve	: 300	Check tolerance cm3/1000s. : +- 4.0 Spreed
travel mm Tolerance mm	: 1.79 : ← 0.10	Tolerance cm3/1000 strokes : 6.0
Rated speed rpm guide sleeve	: 1104	+ Check tolerance + cm3/1000S. : 9.0
travel mm Tolerance mm	: 6.65 : + 0.10	RATED SPEED
Rated speed rpm guide sleeve	: 1050	control lever
travel mm Tolerance mm	: 6.30 : ← 0.10	position degree : 99.0 tolerance degree : +- 4.0
Rated speed rpm	: 792	rack travel mm : 13.00 Rated speed rpm : 1098

Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : + 15	rack travel mm : 14.40 Tolerance mm : +- 0.05 MEASUREMENT
rack travel mm : 0.70 Tolerance mm : +- 0.70 Rated speed rpm : 1300	Pressure hPa : - Rated speed rpm : 400 rack travel mm : 10.60 Tolerance mm : + 0.15
LOW IDLE	Rated speed rpm : 400
control lever position degree : 72.0	Pressure hPa : 450 rack travel mm : 12.90 Tolerance mm : + 0.10
tolerance degree : + 4.0 Testing:	Pressure hPa : 300 rack travel mm : 11.90 Tolerance mm : + 0.15
Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 2.00 Rated speed rpm : 405 Tolerance 1/min : + 20	Aneroid pressure hPa : 1200 Rated speed rpm : 1050
Rated speed rpm : 200	+ Del. quantity + cm3/1000 strokes : 212.0
CRT mm min. : > 7.10	Tolerance cm3/1000 strokes : + 2.0 Check tolerance
TORQUE CONTROL	- cm3/1000s. : +- 5.0 - Spreed
Rated speed rpm : 550 rack travel mm : 14.40 Tolerance mm : + 0.05	Tolerance - cm3/1000 strokes : 8.0 - Check tolerance - cm3/1000s. : 12.0
Rated speed rpm : 1050 rack travel mm : 14.05 Tolerance mm : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 400
Rated speed rpm : 950 rack travel mm : 14.20	+ Del. quantity + cm3/1000 strokes : 107.0 + Tolerance
Tolerance mm : + 0.10 Rated speed rpm : 800	- cm3/1000 strokes : + 1.0 Check tolerance - cm3/1000S. : + 4.0
rack travel mm : 14.40 Tolerance mm : ← 0.05	+ Spreed + Tolerance + cm3/1000 strokes : 8.0
ANEROID/ALTITUDE COMPENSATOR TEST	- Check tolerance - cm3/1000S. : 12.0
SETTING	BREAKAWAY
Rated speed rpm : 400 Pressure hPa : 1200	Rack travel in mm : 13.00 Rated speed rpm : 1098

A11

Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.60 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 60.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 300 5.70 rack travel mm Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 : +-Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 17.11.94 Test oil : ISO 4113

Combination No. : 0402648979

Injection pump

Pump designation : PE8P120A920/4LS7358

EP type number : 0412628899

Governor

Governer design. : RQV350...1100PA795

: -21

Governer no. : 0421814079

Cust. part No. : 1367403

Customer-spec. information

Customer : SCANIA

Motor : DSI14 67/68M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar 0.1

Tolerance 1/h : +- 20.0

Test nozzle holde

: 1688901104 assembly

Opening pressure

bar 251.5 Tolerance bar

Lube oil : 1409918004 Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 4.45 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-2-7-3-4 :-5-6-8 Firing order

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in m Tolerance mm		Tolerance mm : +- 0.50
Del. quantity		- GUIDE SLEEVE POSITION
cm3/1000 strokes	: 283.0	- control lever
Tolerance cm3/1000 strokes	s : +- 1.0	position degree : - 1 Rated speed rpm : 1270
Check tolerance cm3/1000s.	: + 4.0	Rack travel in mm : 14.00 Tolerance mm : +- 1.30
Spreed Tolerance cm3/1000 strokes	: 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 12.0	Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity
(B) SETTING OF I	NJECTION PUMP	cm3/1000 strokes : 283.0 Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRA		Check tolerance cm3/1000S. : +- 4.0 Spreed
Rated speed rpm	: 350	Tolerance cm3/1000 strokes : 8.0
guide sleeve travel mm Tolerance mm	: 1.44 : + 0.25	Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve	: 1158	RATED SPEED
travel mm Tolerance mm	: 7.87 : + 0.25	control lever
Rated speed rpm guide sleeve	+	position degree : 48.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 5.12 : + 0.25	<pre>control lever position degree : 105.0 tolerance degree : +- 4.0</pre>
Rated speed rpm guide sleeve	•	_
guide sleeve travel mm Tolerance mm	: 2.06 : + 0.25	rack travel mm : 13.90 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve		rack travel mm : 4.00 Rated speed rpm : 1300
guide sleeve travel mm Tolerance mm	: + 2.64 : + 0.25	Tolerance 1/min : + 15
Rated speed rpm guide sleeve	;	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1400
travel mm Tolerance mm	: + 0.25	LOW IDLE
Rated speed rpm guide sleeve	+	FOM TOSE
travel mm	: 11.50	

control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 15.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.80 : + 0.30
Rated speed rpm	: 250
CRT mm min.	: > 8.90
CONTINUOUS-ACTION	N CONTROL
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 14.95 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 14.95 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.20 : + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 450 : 11.40 : + 0.25
Pressure hPa rack travel mm Tolerance mm	: 860 : 13.65 : +- 0.05

RACTERISTICS
:
: 500 : 143.0 : + 1.0 : +- 4.0
: 13.90 : 1145 : ← 5
VERY
: 100 : 10.20 : + 0.20 : 150.0 : + 20.0 : + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 : ISO 4113 Test oil

Combination No. : 0402648989

Injection pump

Pump designation : PE8P12OA720LS7266-2

EP type number : 0412628901

Governor

Governer design. : RQ750PA758-15 Governer no. : 0421801660

Cust. part No. : 1371441

Customer-spec, information Customer : SCANIA Motor

: DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1688901104

Opening pressure

251.5 Tolerance bar : **←** 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: ~ 5- 6- 8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 16.15 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 315.0

Tolerance cm3/1000 strokes	: +- 1.0	+ Check tolerance - cm3/1000s. : 12.0
Check tolerance cm3/1000s.	: +- 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes	: 8.0	control lever position degree : 32.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s.	: 12.0	control lever position degree : 94.0
(B) SETTING OF IN	NJECTION PUMP	tolerance degree : +- 4.0
GUIDE SLEEVE TRA		ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm guide sleeve travel mm Tolerance mm	: 6.36	SETTING
Rated speed rpm guide sleeve travel mm		Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 16.15 Tolerance mm : + 0.05
Tolerance mm	: +- 0.25	Tolerance mm : + 0.05 MEASUREMENT
Rated speed rpm guide sleeve travel mm Tolerance mm	: 16.58	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.50 Tolerance mm : + 0.20
Rated speed rpm guide sleeve travel mm	: 798 : 10.00	Tolerance mm : + 0.20 Rated speed rpm : 500
Tolerance mm	: + 0.25	Pressure hPa : 420 rack travel mm : 13.30
Rated speed rpm guide sleeve travel mm	: 860 : 11.50	Tolerance mm : + 0.20 Pressure hPa : 680
Tolerance mm	: +- 0.50	rack travel mm : 15.05 Tolerance mm : + 0.05
FULL LOAD DELIVER	Y AT FULL LOAD STOP	
Rated speed rpm Aneroid pressure	: 700	FUEL DELIVERY CHARACTERISTICS
hPa Del. quantity cm3/1000 strokes	: - : 315.0	Aneroid pressure hPa : -
Tolerance cm3/1000 strokes		+ Rated speed rpm : 500 + Del. quantity + cm3/1000 strokes : 221.0
Check tolerance cm3/1000s. Spreed	: +- 4.0	Tolerance : + 1.0 Check tolerance
Tolerance cm3/1000 strokes	: 8.0	cm3/1000s. : +- 4.0

Aneroid pressure hPa Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : +-6.0 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02.08.94 : ISO 4113

Test oil

Combination No. : 0402746914

Injection pump

Pump designation : PES6P120A720LS7238

: -10

EP type number

: 0412726873

Governor

Governer design. : RQ300/1100PA1008-4

Governer no. : 0421801745

Cust. part No. : 0200748002

Customer-spec. information Customer : MB-NFZ

Motor

: 0M447 hLA

Power KW

: 220.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1417413025

Inlet press. bar : 1.5

Tolerance l/h: +- 10.0

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

Tolerance bar

208.5

Test lines

: 1680750075

Outside diameter : 8.0

x inside diameter :

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Prestroke mm Tolerance mm

test only : **←** 0.10

Rack travel in mm : 20.50

Tolerance mm : + 0.50

Firing order : 6-2-4-1-5-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm

Rack travel in mm : 13.80

Tolerance mm : + - 0.10

Del. quantity

cm3/1000 strokes : 206.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

600

Check tolerance cm3/1000s.	: +- 4.0	+ control lever + position degree	: 98.0
Spreed		tolerance degree	
Tolerance cm3/1000 strokes	: 5.0	rack travel mm Rated speed rpm	: 13.30 : 1153
Check tolerance cm3/1000S.	: 9.0	† Tolerance 1/min	: +- 8
2nd speed rpm	: 300	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1235 : +- 15
Rack travel in mm Tolerance mm Del. quantity	: 6.30 : +- 0.30	rack travel mm Tolerance mm	: 0.75 : + 0.75
cm3/1000 strokes Tolerance		Rated speed rpm	
cm3/1000 strokes Check tolerance	: + 3.0	1011 701 5	
cm3/1000s. Spreed	: + 6.0	LOW IDLE	
Tolerance		control lever	
cm3/1000 strokes Check tolerance	: 8.0	position degree tolerance degree	: 73.0 : + 4.0
cm3/1000s.	: 12.0	Testing:	
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.30 : + 0.10
		T rack travel mm	: 2.00
GUIDE SLEEVE POSIT	ION	Rated speed rpm Tolerance 1/min	: 400
Rated speed rpm	: 650	+	: +- 20
Rack travel in mm	: 20.00	Rated speed rpm	: 200
Tolerance mm	: ← 0.80	CRT mm min.	: > 8.20
FULL LOAD DELIVERY	AT FULL LOAD STOP	TORQUE CONTROL	
	: 600	Rated speed rpm	
	: 600	rack travel mm Tolerance mm	: 13.80 : +- 0.10
Del. quantity cm3/1000 strokes	: 206.0	Rated speed rpm	
Tolerance		+ rack travel mm	: 14.50
Check tolerance		+ Tolerance mm	: + 0.10
cm3/1000s. Spreed	: + 4.0	ANEROID/ALTITUDE	
Tolerance	. -	COMPENSATOR TEST	
cm3/1000 strokes : Check tolorance	: 5.0	‡	
cm3/1uuus.	: 9.0	MEASUREMENT	
RATED SPEED		† Pressure hPa	: 150
		rack travel mm	: -2.10

Tolerance mm	: +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 350 : -0.60 : +- 0.10
Pressure hPa rack travel mm Tolerance mm	: 800 : 0.20 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 220
speed 1/min	: < 240
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa	: 1400
Rated speed rpm	: 1100
Del. quantity cm3/1000 strokes	: 222.5
Tolerance	. 222.3
cm3/1000 strokes	: ← 1.5
Check tolerance	
cm3/1000s.	: +- 4.5
Spreed Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	• • • • • • • • • • • • • • • • • • • •
cm3/1000s.	: 12.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 500
Del. quantity cm3/1000 strokes	: 141.0
Tolerance	: 141.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	
Spreed	: ← 4.0
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	. 12.0
UID/ 10003.	: 12.0
BREAKAWAY	
Rack travel in mm	: 13.30
Rated speed rpm	: 1153
Tolerance 1/min	: ← 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 230.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	:	+-	300 6.30 0.30
Del. quantity cm3/1000 strokes Tolerance	:		19.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes	:		8.0
Check tolerance cm3/1000s.	:		12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 14.12.94 Test oil : ISO 4113 Combination No. : 0403244034 Injection pump Pump designation : PES4MW100/720RS1519 : -3 EP type number : 0413204018 Governor Governer design. : RQV300...1300MW132 : -3 Governer no. : 0420083296 Cust. part No. : 0240740702 Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW 77.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde : 1688901101 assembly Opening pressure bar 208.5 Tolerance bar

: 1680750089

8.0

```
x inside diameter :
                        3.0
 x length mm :
                     600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +- 1.0
Prestroke mm
                       4.55
Tolerance mm
                 : +- 0.05
test only
                 : +- 0.10
Rack travel in mm : 21.00
Firing order : 1-3-4-2
                 : 0-90-180-270
Phasing
Tolerance
                 : +- 0.50
Check
tolerance °NW
                 : ← 0.75
BASIC SETTING
Rated speed rpm
                    1300
Rack travel in mm :
                     11.15
Tolerance mm
                 : +- 0.05
Del. quantity
cm3/1000 strokes :
                      86.0
Tolerance
cm3/1000 strokes
                       1.0
Check tolerance
cm3/1000s.
                 : +-
                       3.0
Spreed
Tolerance
cm3/1000 strokes :
                       3.5
```

Test lines

Outside diameter :

Check tolerance cm3/1000s.	: 6.0	† Tolerance mm : +- 0.50
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: +- 2.0	Rated speed rpm : 1500
Check tolerance cm3/1000S. Spreed	: 4.5	Rack travel in mm: 10.00 Tolerance mm: + 2.00
Tolerance cm3/1000 strokes Check tolerance	: 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 5.5	Rated speed rpm : 1300 Aneroid pressure
(B) SETTING OF IN	NJECTION PUMP	hPa : 700 Del. quantity cm3/1000 strokes : 86.0 Tolerance
GUIDE SLEEVE TRAN	VEL	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 3.0
Rated speed rpm guide steeve		- Spreed - Tolerance
travel mm Tolerance mm	: 0.91 : + 0.25	- cm3/1000 strokes : 3.5 - Check tolerance - cm3/1000s. : 6.0
Rated speed rpm guide sleeve		T (1157 10003. : 6.0
travel mm Tolerance mm	: 7.64 : ← 0.25	RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm	: 5.88	control lever position degree : 112.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve	: 629	rack travel mm : 10.10 Rated speed rpm : 1345 Tolerance 1/min : + 5
travel mm Tolerance mm	: 3.15 : ← 0.25	rack travel mm : 4.00 Rated speed rpm : 1435
Rated speed rpm guide sleeve	: 679	Tolerance 1/min : +- 15
travel mm Tolerance mm	: 3.53 : + 0.25	rack travel mm : 0.50 Tolerance mm : ← 0.50 Rated speed rpm : 1550
Rated speed rpm guide sleeve	: 800	nated speed (piii . 1998)
travel mm Tolerance mm	: 4.00 : +- 0.25	LOW IDLE
Rated speed rpm guide sleeve	: 1596	control lever position degree : 70.0
travel mm Tolerance mm	: 12.00 : + 0.25	tolerance degree : + 4.0
Rated speed rpm guide sleeve	: 1690	Testing: Rated speed rpm : 300
travel mm	: 13.50	rack travel mm : 4.00

this control of the c			
theck tolerance im3/1000s. : +- 4. Spreed olerance im3/1000 strokes : 5. Sheck tolerance im3/1000s. : 7. Sheck tolerance im3/1000s. : 7. Sheck tolerance im3/1000 strokes : 71. Solerance im3/1000 strokes : +- 1. Sheck tolerance im3/1000s. : +- 3. Sheck travel in mm : 10.10 ated speed rpm : 1345 olerance 1/min : +- 1. Sheck tolerance 1/min : +- 1. Sheck tolerance im3/1000 strokes : 125. Sheck tolerance im3/1000 strokes : +- 5. Sheck tolerance im	: ← 0.10		+ Tolerance
m3/1000s. : + 4. Spreed Tolerance m3/1000 strokes : 5. Sheck tolerance m3/1000s. : 7. Sheck tolerance m3/1000s. : 7. Sheck tolerance m3/1000 strokes : 71. Sheck tolerance m3/1000 strokes : + 1. Sheck tolerance m3/1000s. : + 3. Sheck travel in mm : 10.10 mated speed rpm : 1345 mated speed rpm : 1345 mated speed rpm : 1345 mated speed rpm : 100 mated	: 200	•	Check tolerance
im3/1000 strokes: 5 iheck tolerance im3/1000s. : 7 ineroid pressure iPa : - lated speed rpm : 500 iel. quantity im3/1000 strokes : 71 iolerance im3/1000 strokes : + 1 heck tolerance im3/1000s. : + 3 REAKAWAY ack travel in mm : 10. ated speed rpm : 1345 iolerance 1/min : +- TARTING FUEL DELIVERY ated speed rpm : 100 iel. quantity in3/1000 strokes : 125 iolerance im3/1000 strokes : + 5 ineck tolerance	: > 4.50	‡	cm3/1000s. : + 4 Spreed
and speed rpm : 50 l. quantity strokes : 7 lerance strokes : + eck tolerance strokes : + erance 1/min : + erance 1/min : + erance 1/min : + erance 1/min : + erance tolerance : + eck tolera	† Tol	+ Tol	lerance 3/1000 strokes :
neroid pressure Pa :	‡	‡	Check tolerance
ated speed rpm : 500 lel. quantity m3/1000 strokes : 71 olerance m3/1000 strokes : 1 heck tolerance m3/1000s. : 1 REAKAWAY ack travel in mm : 10. ated speed rpm : 1345 olerance 1/min : +- TARTING FUEL DELIVERY ated speed rpm : 100 el. quantity m3/1000 strokes : 125 olerance m3/1000 strokes : 125 olerance m3/1000 strokes : +- 5 meck tolerance	1300	‡ ,	Aneroid pressure
m3/1000 strokes: 7 olerance m3/1000 strokes: +- heck tolerance m3/1000s. : +- REAKAWAY ack travel in mm: 10 ated speed rpm: 134 olerance 1/min: +- TARTING FUEL DELIVERY ated speed rpm: 10 el. quantity m3/1000 strokes: 12: olerance m3/1000 strokes: +- neck tolerance			
heck tolerance m3/1000s. : +- REAKAWAY ack travel in mm : 10 ated speed rpm : 134: olerance 1/min : +- TARTING FUEL DELIVERY ated speed rpm : 100 el. quantity m3/1000 strokes : 125 olerance m3/1000 strokes : +- seck tolerance	: ← 0.10 +	‡	cm3/1000 strokes : 7 Tolerance
REAKAWAY ack travel in mm : 10. ated speed rpm : 1345 olerance 1/min : +- TARTING FUEL DELIVERY ated speed rpm : 100 el. quantity m3/1000 strokes : 125 olerance m3/1000 strokes : +- 5 neck tolerance		‡	Check tolerance
ack travel in mm : 10. ated speed rpm : 1345 olerance 1/min : +- TARTING FUEL DELIVERY ated speed rpm : 100 el. quantity m3/1000 strokes : 125 olerance m3/1000 strokes : +- 5 neck tolerance	‡	‡	
TARTING FUEL DELIVERY ated speed rpm : 100 el. quantity n3/1000 strokes : 125 blerance n3/1000 strokes : + 5 neck tolerance	Ŧ	Ŧ	BREAKAWAY
ated speed rpm : 100 el. quantity m3/1000 strokes : 129 plerance m3/1000 strokes : +- 5	: 500 : 700 : 11.15 : +- 0.05	‡	Rated speed rpm : 134
ated speed rpm : 100 el. quantity m3/1000 strokes : 125 olerance m3/1000 strokes : +- 5 neck tolerance	‡	‡	
el. quantity n3/1000 strokes : 125 plerance n3/1000 strokes : +- 5 neck tolerance	: - ‡	‡	STARTING FUEL DELIVERY
olerance m3/1000 strokes : +- 5. neck tolerance	: + 500 : + 0.10	‡	Del. quantity
eck tolerance	: 500	Ŧ	Tolerance
	: 250 + (+ (Check tolerance
		-	LOW IDLE
NJ TDIE	: > 100	+	
	: > 80 : < 200	<u> </u>	cm3/1000 strokes : 12.
el. quantity 3/1000 strokes : 12.	: < 220	<u> </u>	$cm3/1000$ strokes : \leftarrow 2.
el. quantity n3/1000 strokes : 12. olerance n3/1000 strokes : +- 2.	1		
el. quantity n3/1000 strokes : 12. plerance n3/1000 strokes : \(\to 2. neck tolerance n3/1000s. : \(\to 4.)			Tolerance
el. quantity 13/1000 strokes : 12.6 plerance 13/1000 strokes : \(\ 2.6 pleck tolerance 13/1000s. : \(\ 4.6 pleck tolerance	ARACTERISTICS	Ŧ	cm3/1000 strakes . 7
el. quantity 13/1000 strokes : 12.0 blerance 13/1000 strokes : + 2.0 bleck tolerance 13/1000s. : + 4.5 breed blerance 13/1000 strokes : 3.5 bleck tolerance	‡	<u> </u>	cm3/1000 strokes : 3.5 Check tolerance
el. quantity 13/1000 strokes : 12.0 blerance 13/1000 strokes : + 2.0 bleck tolerance 13/1000s. : + 4.5 breed blerance 13/1000 strokes : 3.5 bleck tolerance	ARACTERISTICS To	+ To + cr + Ct	n3/1000 strokes : 3.5 neck tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.12.94 Test oil : ISO 4113

Combination No. : 0403244035

Injection pump

Pump designation : PES4MW100/720RS1519

EP type number : 0413204018

Governor

Governer design. : RQV300...1300Mw132

: -3

Governer no. : 0420083296

Cust. part No. : 0240740802

Customer-spec. information

Customer : MB-NFZ Motor : OM364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :

/1000 strokes : 86.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 3.0

cm3/1000s. : +- 3.0

Spreed
Tolerance
cm3/1000 strokes : 3.5

A25

Check tolerance cm3/1000s.	: 6.0	† Tolerance mm : ← 0.50
Del. quantity cm3/1000 strokes	. 42.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes		Rated speed rpm : 1500
Check tolerance cm3/1000s.	2.0	Rack travel in mm: 10.00
Spreed Tolerance	; + 4.5	+ Tolerance mm : ← 2.00
cm3/1000 strokes Check tolerance	: 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 5.5	Rated speed rpm : 1300 Aneroid pressure
(B) SETTING OF I	NIECTION PIMP	hPa : 700 Del. quantity
WITH GOVERNOR		cm3/1000 strokes : 86.0
GUIDE SLEEVE TRA	VEL	- cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm		cm3/1000s. : + 3.0 Spreed
guide sleeve travel mm Tolerance mm		Tolerance cm3/1000 strokes : 3.5
Tolerance mm	: ← 0.25	Check tolerance cm3/1000s. : 6.0
Rated speed rpm	: 1345	
travel mm	: 7.64	RATED SPEED
guide sleeve travel mm Tolerance mm	: ← 0.25	
Rated speed rpm guide sleeve	: 1140	control lever position degree : 112.0
travel mm Tolerance mm	: 5.88	+ tolerance degree : + 4.0
Tolerance mm	: ← 0.25	+
Rated speed rpm guide sleeve	: 629	rack travel mm : 10.10 Rated speed rpm : 1345 Tolerance 1/min : +- 5
travel mm	: 3.15	+
Tolerance mm	: ← 0.25	+ rack travel mm : 4.00
Rated speed rpm guide sleeve	: 679	Rated speed rpm : 1435 Tolerance 1/min : +- 15
travel mm	: 3.53	rack travel mm : 0.50
Tolerance mm	: ← 0.25	rack travel mm : 0.50 Tolerance mm : ← 0.50 Rated speed rpm : 1550
Rated speed rpm guide sleeve		
travel mm	: 4.00	+ LOW IDLE
Tolerance mm	: + 0.25	†
Rated speed rpm guide sleeve	: 1596	control lever position degree : 70.0
travel mm Tolerance mm	: 12.00 : ← 0.25	tolerance degree : +- 4.0
Rated speed rpm		Testing:
guide sleeve travel mm	: 13.50	Rated speed rpm : 300 rack travel mm : 4.00
	-	The state of the s

Tolerance mm	: ← 0.10	† Tolerance
Rated speed rpm	: 200	+ cm3/1000 strokes : +- 1.5 + Check tolerance
60T!		Check tolerance cm3/1000s. : +- 4.0
CRT mm min.	: > 4.50	† Spreed
		Tolerance cm3/1000 strokes : 5.0
TORQUE CONTROL		Check tolerance
		- cm3/1000s. : 7.0
Rated speed rpm	: 1300	+
rack travel mm Tolerance mm	11.15	Aneroid pressure
		hPa : - Rated speed rpm : 500
Rated speed rpm rack travel mm Tolerance mm	: 750	Pel. quantity
rack travel mm	: 11.15	+ Del. quantity + cm3/1000 strokes : 71.0
Toterance mm	: ← 0.10	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE		Check tolerance cm3/1000s. : + 3.0
COMPENSATOR TEST		- Sillo/10003 3.0
CETTING		BREAKAWAY
SETTING		İ
Rated speed rpm	: 500	Rack travel in mm: 10.10
Pressure hPa	: 700	+ Rated speed rpm : 1345
rack travel mm	: 11.15	+ Tolerance 1/min : +- 5
Tolerance mm	: ← 0.05	†
MEASUREMENT		İ
COOCHERIN		STARTING FUEL DELIVERY
Pressure hPa	: -	The second secon
Rated speed rpm	: 500	Rated speed rpm : 100
Tolerance mm	: ← 0.10	Del. quantity
Rated speed rpm	• 500	+ cm3/1000 strokes : 125.0
nated speed (pili	. 200	+ Tolerance + cm3/1000 strokes : +- 5.0
Pressure hPa	: 250	Check tolerance
rack travel mm Tolerance mm	: 0.30	+ cm3/1000s. : $+$ 8.0
Tolerance mm	: ← 0.10	+
START CUT-OUT		I -
		+ LOW IDLE
Rated speed rpm	: > 100	†
Check speed 1/min	: > 80	+ Del. quantity
Rated speed rpm		tm3/1000 strokes : 12.0 Tolerance
Check		cm3/1000 strokes : +- 2.0
speed 1/min	: < 220	- Check tolerance
		+ cm3/1000s. : +- 4.5
CIEL NO THEON CLIC	ADACTEDICTICS	Spreed
FUEL DELIVERY CHA	MACIENT21172	Tolerance
Aneroid pressure		cm3/1000 strokes : 3.5 Check tolerance
hPa	: 700	- cm3/1000s. : 5,5
Rated speed rpm	: 750	+
Del. quantity		+
cm3/1000 strokes	- 20.0	<u> </u>

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.12.94 Test oil : ISO 4113

Combination No. : 0403246036

Injection pump

Pump designation : PES6Mw100/720RS1517

EP type number : 0413206019

Governor

Governer design. : RQV300...1300MW132

: ~4

Governer no. : 0420083299

Cust. part No. : 0240744402

Customer—spec. information Customer : MB—NFZ

Motor : 0M366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar: 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : ← 1.0

Prestroke mm : 4.55 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check
tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : - 1.0

Check tolerance cm3/1000s. : ← 3.0

Spreed

Tolerance cm3/1000 strokes	: 3.5	Rated speed rpm : 1780 guide sleeve
Check tolerance cm3/1000S.	: 6.0	travel mm : 13.50 Tolerance mm : +- 0.50
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: +- 2.0	Rated speed rpm : 1450
Check tolerance cm3/1000s. Spreed	: +- 4.5	Rack travel in mm : 13.00 Tolerance mm : +- 2.00
Tolerance cm3/1000 strokes Check tolerance	: 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 5.5	Rated speed rpm : 1300 Aneroid pressure
(B) SETTING OF IN	NJECTION PUMP	hPa : 1000 Del. quantity cm3/1000 strokes : 118.0
•		+ Tolerance + cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAN	/EL	+ Check tolerance
Rated speed rpm guide sleeve	: 300	+ cm3/1000s. : + 3.0 + Spreed + Tolerance
travel mm Tolerance mm	: 1.02 : +- 0.25	cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm guide sleeve	: 1353	- cm3/1000s. : 6.0
travel mm Tolerance mm	: 6.70 : +- 0.25	RATED SPEED
Rated speed rpm guide sleeve	: 1100	- control lever - position degree : 120.0
travel mm Tolerance mm	: 4.76 : ← 0.25	tolerance degree : +- 4.0
Rated speed rpm guide sleeve		rack travel mm : 12.30 Rated speed rpm : 1345 Tolerance 1/min : + 5
travel mm Tolerance mm	: 2.25 : + 0.25	+ rack travel mm : 4.00
Rated speed rpm guide sleeve	: 540	Rated speed rpm : 1485 Tolerance 1/min : +- 15
travel mm Tolerance mm	: 2.50 : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1550
Rated speed rpm guide sleeve	: 710	Rated speed rpm : 155U
travel mm Tolerance mm	: 3.03 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve		control lever position degree : 72.0
travel mm Tolerance mm	: 12.00 : + 0.25	tolerance degree : +- 4.0
		+ Testing:

Rated speed rpm : 300 rack travel mm : 3.80 Tolerance mm : +- 0.10	Check speed 1/min : < 220
Rated speed rpm : 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min. :> 4.50	Aneroid pressure hPa : 1000 Rated speed rpm : 750
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 117.0
Rated speed rpm : 1300 rack travel mm : 13.30 Tolerance mm : +- 0.05	Tolerance cm3/1000 strokes : + 1.5 Check tolerance
	cm3/1000S. : + 4.0 Spreed Tolerance
Rated speed rpm : 750 rack travel mm : 13.30 Tolerance mm : + 0.10	cm3/1000 strokes : 5.5 Check tolerance cm3/1000S. : 7.0
Rated speed rpm : 600 rack travel mm : 13.30 Tolerance mm : + 0.10	Aneroid pressure hPa : 1000 Rated speed rpm : 600
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 119.0 Tolerance cm3/1000 strokes : + 1.5
SETTING	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 13.30 Tolerance mm : + 0.05	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 48.0
MEASUREMENT	+ Tolerance + cm3/1000 strokes : +- 1.0
Pressure hPa : - Rated speed rpm : 500 Tolerance mm : + 0.10	Check tolerance cm3/1000s. : + 3.0
Rated speed rpm : 500	BREAKAWAY
Pressure hPa : 600 rack travel mm : 3.00 Tolerance mm : + 0.10	Rack travel in mm: 12.30 Rated speed rpm: 1345
Pressure hPa : 300 rack travel mm : 1.20 Tolerance mm : +- 0.10	Tolerance 1/min : + 5
	STARTING FUEL DELIVERY
START CUT-OUT	Rated speed rpm : 100 Del. quantity
Rated speed rpm : > 100 Check	cm3/1000 strokes : 150.0 Tolerance
speed 1/min :> 80 Rated speed rpm : < 200	cm3/1000 strokes : +- 5.0 Check tolerance
	cm3/1000s. : +- 8.0

LOW IDLE

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 14.12.94 Edition : ISO 4113 Test oil Combination No. : 0403246038 Injection pump Pump designation : PES6MW100/720RS1517 : -2 EP type number : 0413206019 Governor Governer design. : RQV300...1300Mw132 : -10 Governer no. : 0420083315 Cust. part No. : 0250743902 Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 155.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde assembly : 1688901101 Opening pressure Tolerance bar 1.5

: 1680750089

8.0

Test lines

B04

Outside diameter :

x inside diameter : 3.0 x length mm : 600
REMARKS
(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
BEGINNING OF DELIVERY
Test pressure bar : 31.0 Tolerance bar : +- 1.0
Prestroke mm : 4.55 Tolerance mm : + 0.05
test only : +- 0.10
Rack travel in mm : 21.00
Firing order : 1-5-3-6-2- : 4
Phasing : 0-60-120-180-240
: -300 Tolerance : +- 0.50
Check tolerance °NW : +- 0.75
BASIC SETTING
Rated speed rpm : 1300
Rack travel in mm : 13.30 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 118.0
Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : + 3.0
Spreed

Tolerance cm3/1000 strokes	3.5	Rated speed rpm : 1780 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s.	: 6.0	Tolerance mm : + 0.50
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: + 2.0	Rated speed rpm : 1450
Check tolerance cm3/1000s. Spreed	: +- 4.5	Rack travel in mm : 11.00 Tolerance mm : + 2.00
Tolerance cm3/1000 strokes Check tolerance	: 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 5.5	Rated speed rpm : 1300 Aneroid pressure
(B) SETTING OF I	NJECTION PUMP	+ hPa : 1000 + Del. quantity
WITH GOVERNOR		cm3/1000 strokes : 118.0 Tolerance
GUIDE SLEEVE TRAN	VEL	- cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm guide sleeve	: 300	- cm3/1000s. : +- 3.0 - Spreed - Tolerance
travel mm Tolerance mm	: 1.02 : + 0.25	cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm guide sleeve	: 1354	+ cm3/1000s. : 6.0
travel mm Tolerance mm	: 6.71 : + 0.25	RATED SPEED
Rated speed rpm guide sleeve	: 1090	control lever position degree : 120.0
travel mm Tolerance mm	: 4.70 : + 0.25	tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 490	rack travel mm : 12.30 Rated speed rpm : 1345 Tolerance 1/min : +- 5
travel mm Tolerance mm	: 2.25 : + 0.25	rack travel mm : 4.00
Rated speed rpm guide sleeve	: 540	+ Rated speed rpm : 1485 + Tolerance 1/min : +- 15
travel mm Tolerance mm	: 2.54 : ← 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve	: 690	Rated speed rpm : 1550
travel mm Tolerance mm	: 2.97 : ← 0.25	LOW IDLE
Rated speed rpm guide sleeve	: 1683	control lever position degree : 72.0
travel mm Tolerance mm	: 12.00 : +- 0.25	tolerance degree : + 4.0
		+ Testing:

Rated speed rpm rack travel mm Tolerance mm	: 3.80	† †	Check speed 1/min	: < 220
Rated speed rpm	: 200	‡	FUEL DELIVERY CHA	ARACTERISTICS
CRT mm min.	: > 4.50	†	Aneroid pressure hPa Rated speed rpm	: 1000 : 750
TORQUE CONTROL			Del. quantity cm3/1000 strokes	: 117.0
Rated speed rpm rack travel mm Tolerance mm	: 13.30	‡	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 1.5 : ← 4.0
Rated speed rpm rack travel mm Tolerance mm	: 13.30	‡	Spreed Tolerance cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30	+	cm3/1000S. Aneroid pressure hPa	: 7.0
ANEROID/ALTITUDE COMPENSATOR TEST		 ‡	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 119.0
SETTING		+	cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.5 : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000 : 13.30	‡	Aneroid pressure hPa Rated speed rpm Del. quantity	
MEASUREMENT		+	cm3/1000 strokes Tolerance	
Pressure hPa Rated speed rpm Tolerance mm		+	cm3/1000 strokes Check tolerance cm3/1000s.	: ÷ 1.5 : ÷ 3.0
Rated speed rpm		‡ ¦	Aneroid pressure hPa Rated speed rpm	: – : 500
Pressure hPa rack travel mm Tolerance mm	: 600 : 3.00 : + 0.10	‡ !	Del. quantity cm3/1000 strokes Tolerance	
Pressure hPa rack travel mm Tolerance mm	: 1.20	+ (cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 3.0
START CUT-OUT		-	BREAKAWAY	
Rated speed rpm Check speed 1/min Rated speed rpm	: > 80	 	Rack travel in mm Rated speed rpm Tolerance 1/min	: 1345

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

Del. quantity
cm3/1000 strokes : 12.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 Test oil : ISO 4113

Combination No. : 0403474025

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0413404121

Governor

Governer design. : RSV350...1200MWOA346

Governer no. : 0420085179

Cust. part No. : 0260740602

Customer-spec. information Customer : MB-NFZ : OM 364 A Motor

Power KW 77.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5

Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : \leftarrow 1.0

Prestroke mm 3.75 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm 1200

Rack travel in mm : 11.55 Tolerance mm $: \leftarrow 0.05$

Del. quantity 89.0

cm3/1000 strokes :

Tolerance cm3/1000 strokes Check tolerance	: + 1.0	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0
cm3/1000s.	: + 3.0	
Spreed Tolerance cm3/1000 strokes	: 3.5	RATED SPEED control lever
Check tolerance cm3/1000s.		position degree : 108.0 tolerance degree : +- 4.0
	: 6.0	rack travel mm : 1.00
Del. quantity cm3/1000 strokes Tolerance	1	Tolerance mm : + 0.70 Rated speed rpm : 1450
cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1340
Spreed Tolerance cm3/1000 strokes	‡	rack travel mm : 10.50 Rated speed rpm : 1248 Tolerance 1/min : + 8
Check tolerance cm3/1000s.	: 5.5	roter ande 17mm
Chi37 13003.	. ,,,	LOW IDLE
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	Setting point w/out bumper spring
		Rated speed rpm : 350 rack travel mm : 6.40
GUIDE SLEEVE POSIT	ION	Testing:
control lever	+	rack travel mm : 2.00
position degree	: - 3 : 800	Rated speed rpm : 100
Rack travel in mm	: 0.65	CRT mm min. : > 19.00
	: + 0.35	TORQUE CONTROL
governor spring pre-tension click setting x	: 5.80	Rated speed rpm : 1200 rack travel mm : 11.55 Tolerance mm : + 0.05
FULL LOAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm : 600 rack travel mm : 12.40
Rated speed rpm : Aneroid pressure	: 1200	Tolerance mm : + 0.10
hPa Del. quantity	: 700	Rated speed rpm : 1000
cm3/1000 strokes :	: 89.0	rack travel mm : 12.00 Tolerance mm : + 0.10
cm3/1000 strokes : Check tolerance	: ← 1.0 -	ANDDATA /ALTTUDE
	: ← 3.0	ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:		500
Pressure hPa	:		700
rack travel mm	:		12.40
Tolerance mm	:	+-	0.10

MEASUREMENT

Pressure hPa			_
Rated speed rpm	:		500
rack travel mm	:		9.95
Tolerance mm	:	+-	0.05

Rated	speed	rpm	•	500
Deces	hD.			775

Pressure hPa	•	375
rack travel mm	:	11.65
Tolerance mm	: +	- 0.15

Pressure hPa	:		200
rack travel mm			10.45
Tolerance mm		+-	0.05

FUEL DELIVERY CHARACTERISTICS

Ane	hion	pressu	ire
	·	MI =330	11 E

hPa		700
Rated speed rpm	:	600
Del. quantity		
cm3/1000 strokes	:	85.0
Tolerance		
cm3/1000 strokes	: +	- 1.5
Check tolerance		
cm3/1000s.	: +	- 4.0
Spreed		
Tolerance		
cm3/1000 strokes	:	5.0

cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	7.0

Aneroid pressure

hPa			_
Rated speed rpm			500
Del. quantity			
cm3/1000 strokes	:		50.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	•	+	3 በ

STARTING FUEL DELIVERY

Rated spe	ed rpm	:	100
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Del. quantity cm3/1000 strokes	:	80.0
Tolerance cm3/1000 strokes	: +-	5.0
Check tolerance cm3/1000s.	: +-	8.0

LOW IDLE

Del. quantity		
cm3/1000 strokes Tolerance	:	12.0
cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	•	3.5
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 Test oil : ISO 4113

Combination No. : 0403474026

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0413404121

Governor

Governer design. : RSV350...1300Mw0A346

-2

Governer no. : 0420085177

Cust. part No. : 0260740702

Customer—spec. information Customer : MB-NFZ Motor : OM364A Power KW : 79.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : ← 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 10.85 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.	: +- 3.0	DATED OPER
Spreed	40-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	RATED SPEED
Tolerance cm3/1000 strokes	: 3.5	- control lever - position degree : 110.0
Check tolerance cm3/1000s.	: 6.0	tolerance degree : +- 4.0
Dal acombide	†	rack travel mm : 1.00
Del. quantity cm3/1000 strokes Tolerance	: 12.0	Tolerance mm : +- 0.70 Rated speed rpm : 1550
cm3/1000 strokes Check tolerance	: ← 2.0	- rack travel mm : 4.00 - Rated speed rpm : 1425
cm3/1000s.	: ← 4.5	- Rated speed rpm : 1425
Spreed Tolerance		- rack travel mm : 9.80 - Rated speed rpm : 1345
cm3/1000 strokes Check tolerance	4	Tolerance 1/min : +- 5
cm3/1000s.	: 5.5	
	1	- LOW IDLE
(B) SETTING OF IN	NJECTION PUMP	Setting point w/out bumper spring
	+	- Rated speed rpm : 350 - rack travel mm : 6.40
GUIDE SLEEVE POST	ITION	- Testing:
	1	- rack travel mm : 2.00
control lever	1	Rated speed rpm : 460
position degree Rated speed rpm	: - 3	Tolerance 1/min : +- 40
Rack travel in mm	4	Rated speed rpm : 100
Tolerance mm		CRT mm min. : > 19.00
governor spring	+	
pre-tension click setting x	. 400	TORQUE CONTROL
ction setting x	· +.00	Rated speed rpm : 1300
Fine Loss SELECTION		rack travel mm : 10.85
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Tolerance mm : + 0.05
Rated speed rpm	: 1300 I	Rated speed rpm : 600
Aneroid pressure		rack travel mm : 11.75
hPa Del. quantity	: 700	Tolerance mm : +- 0.05
cm3/1000 strokes : 83.0 Rated speed rpm : Tolerance rack travel mm :		
	: ← 1.0 ‡	
cm3/1000s.	: + 3.0	Rated speed rpm : 1175
Spreed Tolerance	+	rack travel mm : 11.15
cm3/1000 strokes	: 3.5	Tolerance mm : +- 0.15
Check tolerance cm3/1000s.	: 6.0	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 11.75
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.85
Tolerance mm : +- 0.05

Rated speed rpm : 500

Pressure hPa : 300 rack travel mm : 11.30 Tolerance mm : + 0.15

Pressure hPa : 200 rack travel mm : 10.80 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 700 Rated speed rpm 600 Del. quantity cm3/1000 strokes 76.5 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance

7.0

3.0

Aneroid pressure hPa

cm3/1000s.

cm3/1000s.

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 47.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance

: +-

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : +- 5.0
Check tolerance
cm3/1000s. : +- 8.0

LOW IDLE

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	•	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.94 Test oil : ISO 4113

Combination No. : 0403476069

Injection pump

Pump designation : PES6MW100/720RS1129

EP type number : 0413406121

Governor

: RSV750...1250MW0A325 Governer design.

: -2

Governer no. : 0420085115

Cust. part No. : 0110748602

Customer-spec. information

: MB-NFZ Customer : OM 366 LA Motor

Power KW : 146.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

: 1419992198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.75 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1230

Rack travel in mm: 11.55 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes

97.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s. 3.0 : +-

Spreed

Tolerance cm3/1000 strokes : 3.5	control lever position degree : 98.0
Check tolerance cm3/1000s. : 6.0	+ tolerance degree : ← 4.0
Del. quantity cm3/1000 strokes : 12.0 Tolerance	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1350
cm3/1000 strokes : $+-2.0$	LOUITNIE
Check tolerance cm3/1000s. : +- 4.5 Spreed	LOW IDLE
Tolerance cm3/1000 strokes : 3.5	control lever position degree : 78.0
Check tolerance cm3/1000s. : 5.5	tolerance degree : +- 4.0
· , ,,,,	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 750 rack travel mm : 4.70 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30
control lever	Rated speed rpm : 100
position degree : - 3 Rated speed rpm : 800	CRT mm min. : > 19.00
Rack travel in mm : 0.65 Tolerance mm : + 0.35	TORQUE CONTROL
governor spring pre-tension click setting x : 2.50	Rated speed rpm : 1230 rack travel mm : 11.55 Tolerance mm : + 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 750 rack travel mm : 11.55 Tolerance mm : +- 0.10
Rated speed rpm : 1230 Aneroid pressure hPa : -	Total de lixii
Del. quantity cm3/1000 strokes : 97.0 Tolerance	FUEL DELIVERY CHARACTERISTICS
cm3/1000 strokes : + 1.0 Check tolerance	Aneroid pressure
cm3/1000s. : +- 3.0 Spreed	hPa : - Rated speed rpm : 750 Del. quantity
Tolerance cm3/1000 strokes : 3.5	cm3/1000 strokes : 90.0 Tolerance
Check tolerance cm3/1000s. : 6.0	cm3/1000 strokes : +- 1.5 Check tolerance
DATES COTES	+ cm3/1000s. : +- 4.0 + Spreed
RATED SPEED	Tolerance cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.

: 7.0

8.0

STARTING FUEL DELIVERY

Rated speed rpm 100 Det. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s.

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.12.94 Test oil : ISO 4113

Combination No. : 0403476080

Injection pump

Pump designation : PES6MW100/720RS1191

EP type number : 0413406179

Governor

Governer design. : RSV350...1300MW0A329

: -6

: 0420085136 Governer no.

Cust. part No. : 0180747702

Customer-spec. information Customer : MB-NFZ Motor : OM 366 LA Power KW : 170.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar 208.5 Tolerance bar 1.5

Test Lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 000

REMARKS

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : + - 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm 1280

Rack travel in mm : 14.05 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 111.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.	: +- 3.0	DATED COPED	
Spreed Tolerance		+ RATED SPEED	
cm3/1000 strokes Check tolerance	: 3.5	control lever position degree	
cm3/1000s.	: 6.0	tolerance degree rack travel mm	
Del. quantity cm3/1000 strokes Tolerance	: 11.0	Tolerance mm Rated speed rpm	: 1.00 : ← 0.70 : 1550
cm3/1000 strokes Check tolerance		LOW IDLE	
cm3/1000s. Spreed	: +- 4.5	‡	
Tolerance cm3/1000 strokes Check tolerance	: 3.5	control lever position degree	
cm3/1000s.	: 5.0	tolerance degree Testing:	: +- 4.0
(B) SETTING OF IN	JECTION PUMP	Rated speed rpm	: 350
WITH GOVERNOR		rack travel mm Tolerance mm	: 6.10 : + 0.10
GUIDE SLEEVE POSI	TION	rack travel mm	: 2.00
		Rated speed rpm	: 100
control lever position degree Rated speed rpm		CRT mm min.	: > 19.00
Rack travel in mm	: 0.65	TORQUE CONTROL	
Tolerance mm governor spring	: + 0.35	Rated speed rpm rack travel mm Tolerance mm	: 1280 : 14.05 : +- 0.05
pre-tension click setting x	: 4.00	+ Rated speed rom	: 600
FULL LOAD DELIVERY	AT FULL LOAD STOP	rack travel mm Tolerance mm	: + 0.10
Rated speed rpm Aneroid pressure	: 1280	ANEROID/ALTITUDE COMPENSATOR TEST	
hPa Del. quantity	: 1000	‡	
cm3/1000 strokes Tolerance		SETTING	
cm3/1000 strokes Check tolerance		Rated speed rpm Pressure hPa	: 500 : 1000
cm3/1000s. Spreed Tolerance	: +- 3.0	rack travel mm Tolerance mm	14.05 + 0.05
cm3/1000 strokes Check tolerance		MEASUREMENT	
cm3/1000s.	: 6.0	+ Pressure hPa + Rated speed rpm	500

rack travel mm	: 10.15
Tolerance mm	: + 0.05
Rated speed rpm	: 500
Pressure hPa	: 500
rack travel mm	: 12.55
Tolerance mm	: ← 0.15
Pressure hPa	: 350
rack travel mm	: 11.35
Tolerance mm	: ← 0.05

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FUEL	DELIVERI	CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1000 : 600 : 105.0 : + 1.5 : + 4.0
Check tolerance cm3/1000s.	: 7.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 35.0 : + 1.0 : + 3.0

	START	ING	FUEL	DEL	IVERY
--	-------	-----	------	-----	-------

Rated speed rpm Del. quantity	:		100
cm3/1000 strokes	:		105.0
Tolerance cm3/1000 strokes	:	+-	5.0
Check tolerance cm3/1000s.	:	+-	8.0

LOW IDLE

Del. quantity		
cm3/1000 strokes	:	11.0
Tolerance cm3/1000 strokes	• 4	2.0
Check tolerance	• '	2.0
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	•	3.5
Check tolerance		
cm3/1000s.	•	5.0

x Length mm : 600 BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks REMARKS Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 16.12.94 (A) INJECTION PUMP SETTING VALUES Test oil : ISO 4113 Set equal delivery quant. per values ____ Combination No. : 0400463121 Injection pump BEGINNING OF DELIVERY Pump designation : PES3A80D410/3RS1324 EP type number : 0410483017 Prestroke mm 1.95 Governor Tolerance mm : +- 0.05 Governer design. : RSV325...900A7C602 : -4L test only : + - 0.10Governer no. : 0420232604 Rack travel in mm : 10.50 Tolerance mm Cust. part No. : Firing order : 1- 3- 2 Customer-spec. information Customer : KHD Phasing : 0-120-240 Motor : F3L912 Tolerance : +- 0.50Check tolerance °NW : + - 0.75TEST BENCH REQUIREMENTS Test oil inlet BASIC SETTING temp. °C Tolerance °C Rated speed rpm 880 Overflow valve : 1419992198 Rack travel in mm : 11.20 Tolerance mm : +- 0.05 Inlet press. bar : 1.5 Del. quantity cm3/1000 strokes : 50.5 Test nozzle holde Tolerance assembly : 0681343009 cm3/1000 strokes : +-0.5 Opening pressure Check tolerance cm3/1000s.2.0 Tolerance bar Spreed Tolerance Test lines : 1680750014 cm3/1000 strokes : 2.5 Outside diameter : 6.0 Check tolerance cm3/1000s. 4.0

x inside diameter :

2.0

2nd speed rpm : 325	+ Tolerance 1/min : +- 5
Rack travel in mm : 8.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes : 4.0	rack travel mm : 4.00 Rated speed rpm : 960 Tolerance 1/min : +- 15 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100 rack travel mm : 4.00 Rated speed rpm : 975
Check tolerance cm3/1000s. : 6.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 77.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
control lever	Rated speed rpm : 325 rack travel mm : 8.10
position degree : -3 Rated speed rpm : 800	Testing:
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 325 rack travel mm : 8.60 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : +- 30
Rated speed rpm : 880 Aneroid pressure	
hPa : -	TORQUE CONTROL
Del. quantity cm3/1000 strokes : 50.5	
Tolerance : + 0.5 Check tolerance	Rated speed rpm : 880 - rack travel mm : 11.20 - Tolerance mm : +- 0.05
cm3/1000s. : +- 2.0 Spreed	Rated speed rpm : 500 rack travel mm : 11.25
Tolerance cm3/1000 strokes : 2.5	Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : 4.0	
cm3/1000s. : 4.0	-
RATED SPEED	- BREAKAWAY -
control lever position degree : 108.0 tolerance degree : +- 4.0	Rack travel in mm : 10.20 Rated speed rpm : 925 Tolerance 1/min : + 5
rack travel mm : 10.20 Rated speed rpm : 925	- - -

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : + 7.5 Check tolerance cm3/1000s. : + 10.0

LOW IDLE

325 Rated speed rpm 8.60 rack travel mm Tolerance mm : + 0.10Del. quantity cm3/1000 strokes 11.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 3.5 Spreed Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.12.94 : ISO 4113

Combination No.

: 0400463123

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number

: 0410483017

Governor

Governer design. : RSV325...1150A8C275L

Governer no.

: 0420232305

Cust. part No. :

Customer-spec. information

Customer

: KHD

Motor

: F3L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1419992198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 0681343009

Opening pressure

173.5

Tolerance bar

: + 1.5

Test lines

: 1680750014

Outside diameter :

6.0

x inside diameter :

2.0

x length mm

600

B23

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Prestroke mm

1.95

Tolerance mm

: +- 0.05

test only

: +- 0.10

Rack travel in mm : 10.50

Tolerance mm

: +- 1.50

Firing order

: 1- 3- 2

Phasing

: 0-120-240 : **←** 0.50

Check

tolerance °NW

Tolerance

: + - 0.75

BASIC SETTING

Rated speed rpm

1150

Rack travel in mm :

10.65

Tolerance mm

: + - 0.05

Del. quantity cm3/1000 strokes :

Tolerance

50.5

0.5

cm3/1000 strokes

: +-

Check tolerance cm3/1000s.

2.0

Spreed

Tolerance

cm3/1000 strokes :

2.0

Check tolerance cm3/1000s.

3.5

2nd speed rpm

:

325

Rack travel in mm : 8.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : +- 15 rack travel mm : 1.00 Tolerance mm : +- 0.70 Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1240
cm3/1000s. : 3.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 70.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
control lever	Rated speed rpm : 325 rack travel mm : 8.10
position degree : -3 Rated speed rpm : 800	Testing:
Rack travel in mm: 0.65 Tolerance mm: + 0.35	Rated speed rpm : 325 rack travel mm : 8.60 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 680 Tolerance 1/min : +- 30
Rated speed rpm : 1150 Aneroid pressure	35
hPa : - + Del. quantity +	TORQUE CONTROL
cm3/1000 strokes : 50.5	Dimension a mm : 1.30
cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0	Rated speed rpm : 1150 rack travel mm : 10.65 Tolerance mm : + 0.05
Spreed Tolerance cm3/1000 strokes : 2.0	Rated speed rpm : 600 rack travel mm : 11.95
Check tolerance cm3/1000S. : 3.5	Tolerance mm : +- 0.05
RATED SPEED	Rated speed rpm : 800 rack travel mm : 11.35 Tolerance mm : + 0.15
control lever position degree : 105.0 tolerance degree : + 4.0	
rack travel mm : 9.60 Rated speed rpm : 1195	BREAKAWAY
Tolerance 1/min : + 5	Rack travel in mm : 9.60

B24

Rated speed rpm : 1195 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : > 19.00 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 7.5 Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 8.60 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. 3.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 21.12.94 Test oil : ISO 4113 Combination No. : 0400463124 Injection pump Pump designation: PES3A80D410/3RS1324 EP type number : 0410483017 Governor Governer design. : RSV325...1150A8C494 : -4L : 0420232572 Governer no. Cust. part No. Customer—spec. information Customer : KHD Motor : F3L912 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1419992198 Inlet press. bar : 1.5 Test nozzle holde : 0681343009 assembly Opening pressure Tolerance bar Test lines : 1680750014

```
x length mm : 600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Prestroke mm
                       1.95
Tolerance mm
                 : +- 0.05
test only
                 : +- 0.10
Rack travel in mm : 10.50
Tolerance mm
                : ← 1.50
Firing order
                 : 1- 3- 2
Phasing
                 : 0-120-240
Tolerance
                 : +- 0.50
Check
tolerance *NW
                 : ← 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm :
                    1150
Rack travel in mm: 10.60
Tolerance mm
                 : +- 0.05
Del. quantity
cm3/1000 strokes :
                      50.5
Tolerance
cm3/1000 strokes : \leftarrow 0.5
Check tolerance
cm3/1000s.
                 : +--
                       2.0
Spreed
```

Outside diameter :

x inside diameter:

6.0

2.0

Tolerance cm3/1000 strokes : 2.5	RATED SPEED
Check tolerance cm3/1000s. : 4.0	
2nd speed rpm : 325	control lever position degree : 104.0 tolerance degree : +- 4.0
Rack travel in mm: 8.70 Tolerance mm: + 0.10	rack travel mm : 9.60
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1195 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 1.5 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1235
cm3/1000s. : ← 3.5 Spreed	Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 6.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1410
cm3/1000S. : 6.0	rack travel mm : 4.00 Rated speed rpm : 1260
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 71.0 tolerance degree : +- 4.0
control lever position degree : -3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 325 rack travel mm : 8.20
governor spring	Testing:
pre-tension click setting x : 5.00	Rated speed rpm : 325 rack travel mm : 8.70 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 490
Rated speed rpm : 1150 Aneroid pressure hPa : -	Tolerance 1/min : +- 30
Del. quantity cm3/1000 strokes : 50.5	TORQUE CONTROL
Tolerance cm3/1000 strokes : + 0.5 Check tolerance	Rated speed rpm : 1150 rack travel mm : 10.60 Tolerance mm : +- 0.05
cm3/1000S. : +- 2.0 Spreed	Tolerance mm : +- 0.05 Rated speed rpm : 500
Tolerance cm3/1000 strokes : 2.5	rack travel mm : 11.65 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : 4.0	Rated speed rpm : 925 rack travel mm : 11.10
•	· · · · · · · · · · · · · · · · · · ·

Tolerance mm : +- 0.10

BREAKAWAY

Rack travel in mm : 9.60 Rated speed rpm : 1195 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 7.5 Check tolerance cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 8.70 rack travel mm : Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : \leftarrow 1.5 Check tolerance cm3/1000s. : **←** 3.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.94 Test oil : ISO 4113

Combination No. : 0400463129

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0410483017

Governor

Governer design. : RSV325...1150A8C657L

Governer no. : 0420232326

Cust. part No. :

Customer-spec. information Customer : KHD : F3L912 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar 173.5 Tolerance bar : **←** 1.5

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm

REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values BEGINNING OF DELIVERY Prestroke mm Tolerance nm : + 0.05test only : + 0.10Rack travel in mm: 10.50 Tolerance mm : ← 1.50 Firing order : 1- 3- 2 Phasina : 0-120-240 Tolerance : + - 0.50Check tolerance °NW : +- 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : BASIC SETTING Rated speed rpm 1150 Rack travel in mm : 10.60 Tolerance mm : +- 0.05 Del. quantity cm3/1000 strokes :

Tolerance

cm3/1000s.

Spreed

Check tolerance

cm3/1000 strokes : +-

1.95

50.5

0.5

2.0

: +-

Tolerance cm3/1000 strokes : 2.5	+ control lever + position degree : 104.0
Check tolerance cm3/1000s. : 4.0	tolerance degree : +- 4.0
2nd speed rpm : 325	rack travel mm : 9.60 Rated speed rpm : 1195 Tolerance 1/min : +- 5
Rack travel in mm : 8.80 Tolerance mm : +- 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1235
cm3/1000 strokes : 12.5 Tolerance	Tolerance 1/min : +- 15
cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 3.5	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55 + Rated speed rpm : 1350
Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1240
cm3/1000s. : 6.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 71.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 325 rack travel mm : 8.30 Testing:
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 325 rack travel mm : 8.80 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : -	rack travel mm : 2.00 Rated speed rpm : 690 Tolerance 1/min : + 30
Del. quantity cm3/1000 strokes : 50.5	TORQUE CONTROL
Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0	Rated speed rpm : 1150 rack travel mm : 10.60 Tolerance mm : + 0.05
Spreed Tolerance cm3/1000 strokes : 2.5	Rated speed rpm : 900 rack travel mm : 11.15 Tolerance mm : +- 0.15
Check tolerance cm3/1000s. : 4.0	Rated speed rpm : 500 rack travel mm : 11.65
RATED SPEED	Tolerance mm : +- 0.05

BREAKAWAY

Rack travel in mm : 9.60
Rated speed rpm : 1195
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 120.0

Tolerance cm3/1000 strokes : +- 7.5

Check tolerance cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 8.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.5 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000\$. 3.5 : +-Spreed Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.94 Test oil : ISO 4113

Combination No. : 0400464119

Injection pump

Pump designation : PES4A75D410/3RS1255

EP type number : 0410474966

Governor

Governer design. : RSV325...1400A8C495L

Governer no. : 0420232302

Cust. part No. :

Customer-spec. information

Customer : KHD Motor : F4L912

motor : F4L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5Tolerance bar : \leftarrow 1.5

Test lines : 1680750014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Prestroke mm : 1.95
Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.20 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 44.0

Tolerance cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 2.0

Spreed

Tolerance cm3/1000 strokes : 2

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 4.0

2nd speed rpm : 325

CO4

Rack travel in mm: 9.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 11.0 Tolerance	rack travel mm : 9.20 Rated speed rpm : 1445 Tolerance 1/min : +- 5 rack travel mm : 4.00
cm3/1000 strokes : + 1.5 Check tolerance cm3/1000S. : + 3.5	Rated speed rpm : 1485 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1700
cm3/1000s. : 6.0	rack travel mm : 4.00 Rated speed rpm : 1495
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 70.0 tolerance degree : +- 4.0
control lever position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 325 rack travel mm : 8.50
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Testing:
governor spring pre-tension click setting x : 5.50	Rated speed rpm : 325 rack travel mm : 9.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1400	rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : +- 30
Aneroid pressure hPa : -	TORQUE CONTROL
Del. quantity cm3/1000 strokes : 44.0 Tolerance cm3/1000 strokes : + 0.5	Rated speed rpm : 1400 rack travel mm : 10.20
Check tolerance cm3/1000s. : + 2.0	Tolerance mm : + 0.05 Rated speed rpm : 500
Spreed Tolerance	rack travel mm : 11.55 Tolerance mm : +- 0.05
cm3/1000 strokes : 2.5 Check tolerance	Rated speed rpm : 955
cm3/1000s. : 4.0	Rated speed rpm : 955 rack travel mm : 10.90 Tolerance mm : +- 0.10
RATED SPEED	
control lever position degree : 119.0 tolerance degree : + 4.0	BREAKAWAY

CO5

Rack travel in mm: 9.20
Rated speed rpm: 1445
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 110.0 Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 9.00 Tolerance mm : + - 0.10Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 3.5 : +-Spreed Tolerance

cm3/1000 strokes : 4.0 Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.12.94 : ISO 4113

Combination No.

: 0400464124

Injection pump

Pump designation : PES4A80D410/3RS1300

EP type number

: 0410484015

Governor

Governer design.

: RSV325...1150A8C298L

Governer no.

: 0420232308

Cust. part No. :

Customer-spec. information

Customer

: KHD

Motor

: F4L912

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1419992198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 0681343009

Opening pressure

173.5

Tolerance bar

Test lines

: 1680750014

Outside diameter

6.0

x inside diameter :

2.0

x length mm

600

CO7

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Prestroke mm

1.95

Tolerance mm

: + 0.05

test only

: + 0.10

Rack travel in mm: 10.50

Tolerance mm

: + 1.50

Firing order

: 1-3-4-2

Phasing

: 0-90-180-270

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm

1150

Rack travel in mm:

10.50

Tolerance mm

: + - 0.05

Del. quantity

cm3/1000 strokes :

50.5

Tolerance

cm3/1000 strokes

0.5

Check tolerance cm3/1000s.

2.0

Spreed Tolerance

cm3/1000 strokes :

2.5

Check tolerance

cm3/1000s.

4.0

2nd speed rpm

325

Rack travel in mm: 8.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 13.0 Tolerance cm3/1000 strokes: + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000 strokes: 6.0	rack travel mm : 9.50 Rated speed rpm : 1195 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : +- 15 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1420 rack travel mm : 4.00 Rated speed rpm : 1270
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	LOW IDLE
	control lever
GUIDE SLEEVE POSITION	position degree : 73.0
+	tolerance degree : +- 4.0
control lever	Continue mainter deut bereit
position degree : -3	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 325
Dock town in any 0.50	rack travel mm : 5.50
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	Tanking
Total differential . The 0.20	Testing:
governor spring +	Rated speed rpm : 325
pre-tension +	rack travel mm : 8.80
click setting $x : 5.50$	Tolerance mm : $+$ 0.10
	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : + 30
D And 4450	
Rated speed rpm : 1150 Aneroid pressure	TODOUT CONTROL
hPa : -	TORQUE CONTROL
Del. quantity	Rated speed rpm : 1150
cm3/1000 strokes : 50.5	rack travel mm : 10.50
Tolerance cm3/1000 strokes : + 0.5	Tolerance mm : \leftarrow 0.05
Check tolerance	Rated speed rpm : 500
Check tolerance cm3/1000s. : +- 2.0	rack travel mm : 11.25 Tolerance mm : +- 0.05
Spreed Tolerance +	Tolerance mm : +- 0.05
cm3/1000 strokes : 2.5	Pated speed rpm · 880
Check tolerance	Rated speed rpm : 880 rack travel mm : 10.90 Tolerance mm : +- 0.10
cm3/1000s. : 4.0	Tolerance mm : + 0.10
RATED SPEED	
Ţ	
+	
control lever	BREAKAWAY
position degree : 108.0 tolerance degree : + 4.0	
total will degree 4.0	

CO8

Rack travel in mm: 9.50
Rated speed rpm: 1195
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 7.5
Check tolerance
cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 8.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 3.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 19.12.94 Test oil : ISO 4113 Combination No. : 0400866207 Injection pump Pump designation : PES6A100D320/3RS2691 EP type number : 9410230025 Governor Governer design. : RSV400...1100A0c2190 : -79R Governer no. : 0420233318 Cust. part No. : 3921 143 Customer-spec. information Customer : CDC Motor :60 8.3 Power KW : 129.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C : +- 2.0 Overflow valve : 1417413047 Inlet press. bar : 1.5 Test nozzle holde : 1688901101 assembly Opening pressure 208.5 bar Tolerance bar : +- 1.5 Test lines : 1680750014

```
x inside diameter :
                        2.0
 x length mm :
                      600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Prestroke mm
Tolerance mm
                 : + 0.05
test only
                 : + 0.10
Rack travel in mm : 10.50
                 : 1-5-3-6-2-
Firing order
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.50
Check
tolerance °NW
                 : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
                      1
BASIC SETTING
Rated speed rpm
                    1100
Rack travel in mm: 10.65
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     123.5
Tolerance
cm3/1000 strokes : +- 1.0
```

Outside diameter :

6.0

Check tolerance cm3/1000s. : + 3.0	rack travel mm : 9.65 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Spreed Tolerance cm3/1000 strokes : 3.5	rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85
2nd speed rpm : 400	Tolerance mm : +- 0.55 Rated speed rpm : 1300
Rack travel in mm: 5.60	rack travel mm : 4.00 Rated speed rpm : 1210
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 79.0 tolerance degree : +- 4.0
control lever position degree : -3 Rated speed rpm : 800	Setting point w/out bumper spring Rated speed rpm : 400
Rack travel in mm: 0.50 Tolerance mm: + 0.20	rack travel mm : 5.10 Testing:
governor spring pre-tension click setting x : 3.00	Rated speed rpm : 400 rack travel mm : 5.60 Tolerance mm : + 0.10
+	rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30
Rated speed rpm : 1100 Aneroid pressure hPa : -	Rated speed rpm : 100
Del. quantity cm3/1000 strokes : 123.5	CRT mm min. : > 19.50
Tolerance cm3/1000 strokes : + 1.0	TORQUE CONTROL
Check tolerance cm3/1000s. : +- 3.0 Spreed	Rated speed rpm : 1100 rack travel mm : 10.65
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 10.65 Tolerance mm : + 0.05
Check tolerance cm3/1000S. : 8.0	
RATED SPEED	BREAKAWAY
control lever position degree : 99.0 tolerance degree : + 4.0	Rack travel in mm: 9.65 Rated speed rpm: 1145 Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm 100 20.25 rack travel mm : : +- 0.75 Tolerance mm

Del. quantity cm3/1000 strokes :

145.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 400 rack travel mm : 5.60

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.94 Test oil : ISO 4113

Combination No. : 0401446150

Injection pump

Pump designation : PE6R130/720RS1506

EP type number : 0411436002

Governor

Governer design. : RQV250...1050R4K

Governer no. : 0421415003

Cust. part No. : 865 020 PO2

Customer-spec. information Customer : PENTA

Motor : TAMD163 P-A

Power KW : 553.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2417413078

Inlet press. bar Tolerance bar

Test nozzle holde

assembly : 1688901105

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar

Prestroke mm 4.45 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 0.50

: 1-5- 3- 6- 2-: 4 Firing order

Phasing : 0-60-120-180-240

: -300 Tolerance : + - 0.30

Check

tolerance "NW : + - 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 1050

Rack travel in mm: 14.40 Tolerance mm 0.05

Del. quantity cm3/1000 strokes : 450.0

Tolerance	 	
cm3/1000 strokes : +-	2.0	control lever position degree : - 1
Check tolerance cm3/1000s. ; +-	5.0	Rated speed rpm : 1205
Spreed Tolerance	 ‡	Rack travel in mm : 11.00 Tolerance mm : +- 2.50
	3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 1	7.0	Rated speed rpm : 1050
	‡	Aneroid pressure hPa : 2200
(B) SETTING OF INJECTION WITH GOVERNOR	PUMP	Del. quantity cm3/1000 strokes : 450.0
GUIDE SLEEVE TRAVEL		Tolerance cm3/1000 strokes : +- 2.0
Rated speed rpm : 25	n I	Check tolerance cm3/1000s. : +- 5.0 Spreed
guide sleeve	.26	Tolerance cm3/1000 strokes : 13.0
Tolerance mm : + 0		Check tolerance cm3/1000s. : 17.0
Rated speed rpm : 1100 guide sleeve	1	
travel mm : 9. Tolerance mm : + 0.	.18 .25	RATED SPEED
Rated speed rpm : 895 guide sleeve	5 ‡	control lever position degree : 65.0
	42	position degree : 65.0 tolerance degree : +- 4.0
Rated speed rpm : 310	1	control lever position degree : 119.0
	00 ‡	tolerance degree : +- 4.0
	25	rack travel mm : 13.40 Rated speed rpm : 1105
Rated speed rpm : 360 guide sleeve travel mm : 2.	41	Tolerance 1/min : +- 5
Tolerance mm : + 0.		rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15
Rated speed rpm : 570 guide sleeve) [rack travel mm : 0.50
	54 25	Tolerance mm : ← 0.50 Rated speed rpm : 1300
Rated speed rpm : 1360	†	
guide sleeve travel mm : 13. Tolerance mm : + 0.		LOW IDLE
roterance min : +- U.	I	control lever
GUIDE SLEEVE POSITION	Ī	position degree : 74.0 tolerance degree : +- 4.0
	‡	control lever position degree : 20.0

tolerance degree	: ← 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 6.65 : + 0.20
Rated speed rpm	: 150
CRT mm min.	: > 7.70
CONTINUOUS-ACTION	CONTROL
Rated speed rpm	: 380
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 850 : 13.20 : + 0.15
Rated speed rpm rack travel mm Tolerance mm	: 975 : 14.30 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1050 : 2200 : 14.40 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 8.70 : + 0.15
Rated speed rpm	: 1050
Pressure hPa rack travel mm Tolerance mm	: 1580 : 5.10 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 410 : 0.25 : + 0.05

Aneroid pressure hPa Rated speed rpm	: 3	2200 850
Del. quantity cm3/1000 strokes	*	412.0
Tolerance cm3/1000 strokes Check tolerance	: +-	4.0
cm3/1000s. Spreed	: +-	7.0
Tolerance cm3/1000 strokes Check tolerance	•	15.0
cm3/1000s.	:	19.0
Aneroid pressure	•	_
Rated speed rpm Del. quantity	e •	500
cm3/1000 strokes Tolerance	•	238.0
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s.	: +-	5.0
BDEVKVIIVA		

BREAKAWAY

Rack travel in mm : 13.40
Rated speed rpm : 1105
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 410.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.94 Test oil : ISO 4113

Combination No. : 0401856700

Injection pump

Pump designation : PE6P110A721RS3101

EP type number : 0411816725

Governor

Governer design. : RQ300/1200PA412

Governer no. : 0421801172

Cust. part No. :

Customer—spec. information

Customer : SNF

Motor : WD615.67 Power KW

: 206.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

: 0681343009 assembly

Opening pressure

bar Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : \leftarrow 1.0

2.85 Prestroke mm Tolerance mm : +- 0.05

test only : + - 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-: 4 Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.35Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm 1200

Rack travel in mm : 12.05 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 163.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance 4	
cm3/10003. : +- 4.0	- control lever
	position degree : 40.0
Spreed	- tolerance degree : +- 4.0
Tolerance	-
cm3/1000 strokes : 4.0	- rack travel mm : 11.00
	- Rated speed rpm : 1253
Check tolerance	- Tolerance 1/min : +- 8
cm3/1000s. : 7.5	
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 15.0	- Rated speed rpm : 1340 - Tolerance 1/min : +- 15
Tolerance	· Toterance Militi : += 15
cm3/1000 strokes : +- 3.0	rack travel mm : 0.75
Check tolerance	- Tolerance mm : +- 0.75
cm $3/1000$ S. : \leftarrow 5.5	Rated speed rpm : 1450
Spreed	•
Tolerance	
cm3/1000 strokes : 4.5	LOW IDLE
Check tolerance cm3/1000s. : 7.5	•
(IID) 10003 7.5	control lever
I	position degree : 14.0
(B) SETTING OF INJECTION PUMP	tolerance degree : + 4.0
WITH GOVERNOR	. The degree of the state of th
+	Testing:
+	
CUIDE OF EDUE POOTETON	Rated speed rpm : 300
GUIDE SLEEVE POSITION	rack travel mm : 6.00
†	Tolerance mm : + 0.10
control lever	rack travel mm : 2.00
position degree : -1	rack travel mm : 2.00 Rated speed rpm : 425
Rated speed rpm : 600	Tolerance 1/min : +- 20
	Total dilectivity 1. 1. Ed
Rack travel in mm: 16.00	Rated speed rpm : 100
Tolerance mm : \leftarrow 0.60	
+	CRT mm min. : > 7.50
FULL LOAD DELIVERY AT FULL LOAD STOP	
TOTAL FOUND SETTING AT LOTE FOUND STOP	TORQUE CONTROL
Rated speed rpm : 1200	ONGOL CONTINUE
Aneroid pressure	Dimension a mm : 0.35
hPa : 700 4	
Del. quantity	Rated speed rpm : 1075
cm3/1000 strokes : 163.0	rack travel mm : 12.30
Tolerance	Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0 + Check tolerance	Dated speed OFF
cm3/1000s. : + 4.0	Rated speed rpm : 985 rack travel mm : 12.50
Spreed	rack travel mm : 12.50 Tolerance mm : +- 0.10
Tolerance	U. [U
cm3/1000 strokes : 4.0	Rated speed rpm : 600
Check tolerance	rack travel mm : 12.75
cm3/1000s. : 7.5	Tolerance mm : +- 0.15
+	
PATED COEED	Rated speed rpm : 1200
RATED SPEED	rack travel mm : 12.05
†	Tolerance mm : +- 0.05
Ť	

Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.45 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 12.50 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 10.20 + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 330 : 10.35 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 420 : 11.55 : + 0.05
FUEL DELIVERY CHAR	ACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 700 : 700
cm3/1000 strokes Tolerance	: 167.0
cm3/1000 strokes Check tolerance	: ← 2.0
cm3/1000s.	: +- 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 700
cm3/1000 strokes Tolerance	: 121.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	

Rack travel in mm : 11.00
Rated speed rpm : 1253
Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Del. quantity		
cm3/1000 strokes Tolerance	•	15.0
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000S.	: +-	5.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	4.5
cm3/1000s.	:	7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0401876804

Injection pump

Pump designation : PE6P12DA32ORS3339

EP type number : 0411826812

Governor

Governer design. : RSV325...1400P0A590

Governer no. : 0421833450

Cust. part No. : 3825199

: -P04 15.12.94

Customer—spec. information Customer : PENTA Motor : TAMD63 L

Power KW : 228.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 2417413077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 7688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 6.40
Tolerance mm: + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check
tolerance "NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 8.90 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 141.0

TIOU STIONES .

	V
Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	control lever position degree : 118.0 tolerance degree : +- 4.0
Spreed Tolerance cm3/1000 strokes : 5.0	rack travel mm : 7.90 Rated speed rpm : 1470 Tolerance 1/min : +- 5
Check tolerance cm3/1000S. : 9.0	rack travel mm : 4.00 Rated speed rpm : 1530 Tolerance 1/min : + 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1630
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 82.0 tolerance degree : +- 4.0
Rack travel in mm : 0.55 Tolerance mm : + 0.25	control lever position degree : 32.0 tolerance degree : + 4.0
governor spring pre-tension	Setting point w/out bumper spring
click setting x : 5.00	Rated speed rpm : 325 rack travel mm : 3.70
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity	Rated speed rpm : 325 rack travel mm : 4.20 Tolerance mm : +- 0.20
cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	rack travel mm : 2.00 Rated speed rpm : 460 Tolerance 1/min : + 30
cm3/1000s. : + 4.0 Spreed Tolerance	TORQUE CONTROL
cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 1400 rack travel mm : 8.90
cm3/1000s. : 9.0	Tolerance mm : + 0.10
RATED SPEED	ANEROID/ALTITUDE COMPENSATOR TEST
control lever position degree : 68.0 tolerance degree : +- 4.0	SETTING 500
	+ Rated speed rpm : 500 + Pressure hPa : 2000

rack travel mm Tolerance mm	: 8.90 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 870 : 1.90 : +- 0.15
Pressure hPa rack travel mm Tolerance mm	: 510 : 0.25 : ← 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 93.0 : + 1.0 : + 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1470
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 12.00 : ← 0.25

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402036747

Injection pump

Pump designation : PES6P110A120RS3296

EP type number : 0412016738

Governor

Governer design. : RQV400...1250PA1014

: -1K

Governer no. : 0421815291

Cust. part No. : 3921837

Customer-spec. information

Customer : CUMMINS Motor : 6BTA-A

Power KW : 130.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40

Tolerance °C : \leftarrow 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

par : 208.5

Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

. /.

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

S.o.d. blocking

Barrel no. : 1

Tolerance : +- 0.10

Check

tolerance "NW : \leftarrow 0.23

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.05 Tolerance mm : + 0.05

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Del. quantity cm3/1000 strokes	: 145.0	Rated speed rpm Tolerance 1/min	
Tolerance cm3/1000 strokes	: + 1.0	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Check tolerance cm3/1000s.	: + 3.0	LOW IDLE	
Spreed Tolerance cm3/1000 strokes	: 4.0	control lever position degree tolerance degree	: 15.0 : + 4.0
Check tolerance cm3/1000s.	: 7.5	Testing:	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Rated speed rpm rack travel mm Tolerance mm	: 5.30
		Rated speed rpm	: 275
GUIDE SLEEVE POSI	TION	CRT mm min.	: > 7.00
control lever position degree		CONTINUOUS-ACTION Rated speed rpm	
FULL LOAD DELIVER	Y AT FULL LOAD STOP	TORQUE CONTROL	
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 1200	Rated speed rpm rack travel mm Tolerance mm	: 1250 : 13.05 : +- 0.05
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 1.0 : + 3.0	Rated speed rpm rack travel mm Tolerance mm	: 11.10
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 4.0 : 7.5	ANEROID/ALTITUDE COMPENSATOR TEST	
		SETTING	
RATED SPEED control lever		Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : 1200 : 13.05
position degree tolerance degree	: 59.0 : ← 4.0	MEASUREMENT	
rack travel mm Rated speed rpm Tolerance 1/min	: + 5	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1250 : 8.50 : + 0.20
rack travel mm	: 4.00	+	

C23

Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 565 : 11.80 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 255 : 9.65 : ← 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 290
Check speed 1/min	: < 300
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: 1200 : 800
Del. quantity cm3/1000 strokes Tolerance	: 138.5
cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	
Rated speed rpm Del. quantity	500
cm3/1000 strokes Tolerance	: 99.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.00 : 1300 : +- 5
STARTING FUEL DELI	IVERY

Rated speed rpm : 100 rack travel mm : 11.40 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402046789

Injection pump

Pump designation : PES6P120A320RS3139

EP type number : 0412026718

Governor

Governer design. : RQV275...1000PA728

: -3

Governer no. : 0421813657

Cust. part No. : CCEP 5070 -116

Customer-spec. information

Customer : RVI

Motor : MIDR 062045 H

Power KW : 227.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

Start-of-delivery mark 9° cam angle after start of delivery cyl. 1.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.15

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 195.0

CIID/ 1000 Strokes . 193.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 4.0	rack travel mm : -10.65 Tolerance mm : +- 0.50 Rated speed rpm : 1300
Spreed Tolerance cm3/1000 strokes : 5.0	LOW IDLE
	+ LOW IDLE
Check tolerance : 9.0	control lever position degree : 67.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
GUIDE SLEEVE POSITION	T Rated speed rpm : 275 - rack travel mm : -5.30 - Tolerance mm : + 0.15
	Rated speed rpm : 200
control lever position degree : - 1 Rated speed rpm : 1170	CRT mm max. : < -3.80
Rack travel in mm: 16.50 Tolerance mm: + 1.30	CONTINUOUS-ACTION CONTROL
	Rated speed rpm : 370
FULL LOAD DELIVERY AT FULL LOAD STOP	TODOUE CONTROL
Rated speed rpm : 1000	TORQUE CONTROL
Aneroid pressure hPa : 1000	Rated speed rpm : 600
Del. quantity cm3/1000 strokes : 195.0 Tolerance	ANEROID/ALTITUDE COMPENSATOR TEST
cm3/1000 strokes : + 1.0 Check tolerance	
cm3/1000s. : +- 4.0 Spreed	SETTING
Tolerance - cm3/1000 strokes : 5.0 - Check tolerance -	Rated speed rpm : 500 Pressure hPa : 1000
cm3/1000s. : 9.0	MEASUREMENT
RATED SPEED	Pressure hPa : - Rated speed rpm : 500 rack travel mm : -2.20
control lever	Tolerance mm : + 0.20
position degree : 119.0 tolerance degree : +- 4.0	- Rated speed rpm : 500
rack travel mm : -1.00 - Rated speed rpm : 1075 - Tolerance 1/min : +- 5	- Pressure hPa : 160 - rack travel mm : -1.70 - Tolerance mm : +- 0.10
rack travel mm : -7.15 Rated speed rpm : 1190 Tolerance 1/min : + 15	Pressure hPa : 280 rack travel mm : -0.75 Tolerance mm : +- 0.05

CS6

START CUT-OUT Rated speed rpm : > 100 Check speed 1/min 80 : > Rated speed rpm 195 : < Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm 600 Del. quantity cm3/1000 strokes : 195.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 103.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** Rack travel in mm : -1.00Rated speed rpm : 1075 Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 145.0 Tolerance : +- 10.0 cm3/1000 strokes Check tolerance

: +- 14.0

cm3/1000S.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 21.12.94 : ISO 4113

Combination No. : 0402646780

Injection pump

Pump designation : PE6P120A320LS7872

EP type number : 0412626912

Governor

Governer design. : R0300/950PA1121

Governer no.

: 0421801701

Cust. part No. : 04221524KY016517

Customer-spec. information

Customer : KHD

Motor : BF6M1015/C

Power KW : 300.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar :

Tolerance bar : +-

Test nozzle holde

assembly : 1688901105

Opening pressure

bar 208.5

Tolerance bar : **←** 1.5

Lube oil : 1409918004

Test lines : 1680750075 Outside diameter : 8.0

x inside diameter : 3.0

1000 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 4.05 Tolerance mm

test only : ← 0.10

Rack travel in mm: 10.50 Tolerance mm : **←** 1.50

Firing order : 1-6-3-5-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : + - 0.30

Check

tolerance *NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 14.50

Tolerance mm : **←** 0.05

Del. quantity cm3/1000 strokes	: 362.0	travel mm : 6.00 Tolerance mm : + 0.10
Tolerance cm3/1000 strokes	: + 1.0	Rated speed rpm : 1150
Check tolerance cm3/1000s.	: +- 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000S.	: 9.0	control lever position degree : - 1 Rated speed rpm : 700
2nd speed rpm	: 300	+
Rack travel in mm Tolerance mm Del. quantity	n: 4.80 : ← 0.20	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
cm3/1000 strokes Tolerance	: 20.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance		Rated speed rpm : 950 Aneroid pressure
cm3/1000S. Spreed	: +- 6.0	hPa : 1700 Del. quantity
Tolerance cm3/1000 strokes	: 8.0	cm3/1000 strokes : 362.0 Tolerance
Check tolerance cm3/1000s.	: 12.0	cm3/1000 strokes : +- 1.0 Check tolerance
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	- cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 5.0 - Check tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000s. : 9.0
Rated speed rpm guide sleeve	: 300	RATED SPEED
travel mm Tolerance mm	: 2.23 : + 0.10	control lever position degree : 101.0
Rated speed rpm guide sleeve	: 1001	tolerance degree : +- 4.0
travel mm Tolerance mm	: 6.36 : + 0.10	rack travel mm : 13.50 Rated speed rpm : 995
Rated speed rpm guide sleeve	: 950	Tolerance 1/min : +- 5 + rack travel mm : 4.00
travel mm Tolerance mm	: 6.00 : +- 0.10	Rated speed rpm : 1070 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 385	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	: 5.22 : ← 0.10	Rated speed rpm : 1165
Rated speed rpm	: 450	LOW IDLE

control lever position degree tolerance degree Testing:	: 75.0 : + 4.0	† † †	Check speed 1/min :> 80 Rated speed rpm : < 220 Check speed 1/min : < 240
u	• 300	‡	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: 4.80 : +- 0.10	<u> </u>	Aneroid pressure hPa : - Rated speed rpm : 400
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 355 : ← 20	+	Del. quantity cm3/1000 strokes : 240.0 Tolerance
Rated speed rpm	: 200	‡	cm3/1000 strokes : +- 1.0 Check tolerance
CRT mm min.	: > 7.10	‡	cm3/1000s. : +- 4.0
TORQUE CONTROL			BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 950 : 14.50 : + 0.05		Rack travel in mm: 13.50 Rated speed rpm: 995 Tolerance 1/min: + 5
ANEROID/ALTITUDE COMPENSATOR TEST		1	STARTING FUEL DELIVERY
SETTING Rated speed rpm	: 400	<u> </u>	Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity
Pressure hPa rack travel mm Tolerance mm	: 1700 : 14.50	‡	cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
MEASUREMENT		1	cm3/1000s. : +- 24.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 400 : 9.00 : +- 0.20	+	LOW IDLE
Rated speed rpm	: 400	‡	Rated speed rpm : 300
Pressure hPa rack travel mm Tolerance mm	: 550 : 10.95 : ← 0.20	† †	rack travel mm : 4.80 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 20.0
Pressure hPa rack travel mm Tolerance mm	: 1000 : 13.10 : + 0.05	† † ‡	Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
START CUT-OUT	·	 ‡	Spreed Tolerance cm3/1000 strokes : 8.0
Rated speed rpm	: > 100	‡	Check tolerance cm3/1000s. : 12.0

DCS

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 20.12.94
Test oil : ISO 4113

Combination No. : 0402646947

Injection pump

Pump designation : PE6P13DA72DRS7225

EP type number : 0412636817

Governor

Governer design. : RQV300...950PA1002

: -1K

Governer no. : 0421815280

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8210.42.400

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1 S.o.d. blocking

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 314.0

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1	Talanau
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : +- 4.0	
Spreed Tolerance cm3/1000 strokes : 5.0	RATED SPEED control lever position degree : 115.0
Check tolerance cm3/1000S. : 9.0	tolerance degree : +- 4.0
2nd speed rpm : 300	rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5
Rack travel in mm: 4.90 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 22.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000 strokes: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1120 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 rack travel mm : 4.00 LOW IDLE control lever position degree : 68.0
CHARE CLEENE POOLETON	tolerance degree : + 4.0 Testing:
control lever position degree : - 1 Rated speed rpm : 1240	Rated speed rpm : 300 rack travel mm : 4.90 Tolerance mm : +- 0.10 Rated speed rpm : 100
Rack travel in mm : 8.00 Tolerance mm : + 2.00	CRT mm min. : > 6.40
FULL LOAD DELIVERY AT FULL LOAD STOP	CONTINUOUS-ACTION CONTROL
Rated speed rpm : 900 Aneroid pressure	Rated speed rpm : 400
hPa : 900 + Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 314.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05
cm3/1000s. : + 4.0 Spreed	Rated speed rpm : 700 rack travel mm : 13.65 Tolerance mm : +- 0.10

		1	Del. quantity	
Rated speed rpm rack travel mm Tolerance mm	: 12.85 : ← 0.10	-	cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: + 1.0
Rated speed rpm rack travel mm Tolerance mm	: 12.20	†	cm3/1000s. BREAKAWAY	: + 4.0
			DILLINAMA	
ANEROID/ALTITUDE COMPENSATOR TEST		‡	Rack travel in m Rated speed rpm Tolerance 1/min	n: 12.80 : 995
SETTING		+		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	900	‡	STARTING FUEL DEL	
Tolerance mm	: ← 0.05	+	Rated speed rpm	: 100
MEASUREMENT		Ī	Del. quantity cm3/1000 strokes	: 150.0
Rated speed rpm	: 900	<u> </u>	Tolerance cm3/1000 strokes	· + 15 0
•		+	Check tolerance	
Pressure hPa rack travel mm Tolerance mm	: 300 : 10.45 : + 0.20	+	cm3/1000s.	: +- 19.0
Pressure hPa	: 580	Ŧ		
rack travel mm Tolerance mm	: 12.70 : +- 0.05	‡	LOW IDLE	
		+	Rated speed rpm	: 300
START CUT-OUT		-	rack travel mm Tolerance mm	: 4.90 : + 0.20
Rated speed rpm	: > 100	1	Del. quantity cm3/1000 strokes	
Check		Ŧ	Tolerance	
speed 1/min Rated speed rpm		1	cm3/1000 strokes Check tolerance	: +- 3.0
Check		+	cm3/1000S.	: +- 6.0
speed 1/min	: < 240	‡	Spreed Tolerance	
FUEL DELIVERY CHA	ADACTEDICTICS		cm3/1000 strokes	: 8.0
	HARLIERISIIES	Į	Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	: 900	<u>†</u>		
Rated speed rpm	: 550	Ŧ		
Del. quantity cm3/1000 strokes	: 289.0	‡		
Tolerance		+		
cm3/1000 strokes Check tolerance	: + 3.0	‡		
cm3/1000s.	: +- 6.0	+		
Aneroid pressure		‡		
hPa Rated speed rpm	: – : 500	+		
waren sheen thu	. , ,,,,,,	Ī		

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 16.12.94 Edition : ISO 4113 Test oil Combination No. : 0402646971 Injection pump Pump designation : PE6P120A320RS7218 : -10z EP type number : 0412626892 Governor Governer design. : RQV275...1000PA939 : -2 Governer no. : 0421813986 Cust. part No. : 1249337/5 Customer-spec. information : DAF Customer Motor : WS 242 L TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar : 1.5 Overflow quantity min. L/h 105 Tolerance 1/h : **←** 10.0 Test nozzle holde : 1688901105 assembly Opening pressure : 208.5 : + 1.5 bar Tolerance bar

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +- 1.0 Prestroke mm Tolerance mm : + 0.05 test only : ← 0.10 Rack travel in mm: 14.50 : +- 0.50 Tolerance mm Firing order : 1-5-3-6-2-Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30 Check tolerance "NW : **←** 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 1 BASIC SETTING Rated speed rpm : 850 Rack travel in mm: 13.95 Tolerance mm : +- 0.05

Test lines : 1680750089

Del. quantity cm3/1000 strokes : 210.0	Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 119.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	rack travel mm : 12.95
2nd speed rpm : 275	Rated speed rpm : 1042 Tolerance 1/min : +- 5
Rack travel in mm : 6.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0	rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1250
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	LOW IDLE
cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 82.0 tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10
control Lever	Rated speed rpm : 175
position degree : -1 Rated speed rpm : 1130	CRT mm min. : > 7.50
Rack travel in mm : 13.90 Tolerance mm : +- 1.30	CONTINUOUS-ACTION CONTROL
	Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 850 Aneroid pressure hPa : 1000 Del. quantity	Rated speed rpm : 850 rack travel mm : 13.95 Tolerance mm : +- 0.05
cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1000 rack travel mm : 13.95 Tolerance mm : +- 0.10

: 600 : 1000 : 13.95 : +- 0.05
: - : 600 : 12.00 : + 0.10
: 600
: 420 : 13.35 : +- 0.05
: 300 : 12.55 : +- 0.10
RACTERISTICS
: 600 : 153.0 : ← 1.0 : ← 4.0

LOW IDLE

D09

Rated speed rpm

275

rack travel mm Tolerance mm	: +	6.10 0.10
Del. quantity cm3/1000 strokes	:	17.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	•	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402646973

Injection pump

Pump designation : PE6P12DA32ORS7218

: -10Z

EP type number : 0412626892

Governor

Governer design. : RQ275/1000PA936-2

Governer no. : 0421801633

Cust. part No. : 1249172/5

Customer-spec. information

Customer : DAF

Motor : WS 242 L

Power KW : 242.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110
Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.35 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30 Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.95 Tolerance mm : + 0.05

		1 Datadassadassa (50
Del. quantity cm3/1000 strokes	======================================	Rated speed rpm : 450 guide sleeve travel mm : 6.00
		+ Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes	s : 1.0	Rated speed rpm : 1220
Check tolerance cm3/1000s.	: +- 4.0	travel mm : 11.50 Tolerance mm : +- 0.50
Spreed		
Tolerance cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 9.0	control lever position degree : - 1
2nd speed rpm	: 275	Rated speed rpm : 550
•		Rack travel in mm : 16.00
Rack travel in m Tolerance mm Del. quantity	m: 6.10 : + 0.10	Tolerance mm : + 0.60
cm3/1000 strokes Tolerance	, ,,,,,	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: - 3.0	Rated speed rpm : 850
cm3/1000s. Spreed	: +- 6.0	+ Aneroid pressure + hPa : 1000 + Del. quantity
Tolerance		- cm3/1000 strokes : 210.0
cm3/1000 strokes Check tolerance	: 8.0	Tolerance cm3/1000 strokes : + 1.0
cm3/1000s.	: 12.0	† Check tolerance
		+ cm3/1000s. : ← 4.0 - Spreed
(B) SETTING OF IN	WECTION PUMP	† Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : 5.0 + Check tolerance
GUIDE SLEEVE TRAV		— + cm3/1000s. : 9.0
Rated speed rpm	: 275	RATED SPEED
guide sleeve		TOTAL OF LEA
travel mm Tolerance mm	: 1.64 : ← 0.10	control lever
Rated speed rpm		position degree : 109.0 tolerance degree : + 4.0
guide sleeve travel mm	: 6.43	rack travel mm : 12.95
Tolerance mm	· + 0.10	Rated speed rpm : 1042 Tolerance 1/min : + 8
Rated speed rpm	: 1000	+
guide sleeve travel mm	: 6.00	+ rack travel mm : 4.00 + Rated speed rpm : 1135
Tolerance mm	: ← 0.10	Tolerance 1/min : + 15
Rated speed rpm	: 356	rack travel mm : 0.70
guide sleeve travel mm	: 4.13	Tolerance mm : +- 0.70 Rated speed rpm : 1250
Tolerance mm	: +- 0.10	1
		†

LOW IDLE	
control lever position degree tolerance degree	: 73.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.00 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 350 : +- 20
Rated speed rpm	: 175
CRT mm min.	: > 6.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 850 : 13.95 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.95 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 13.95 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 12.00 : +- 0.10
Rated speed rpm	: 600
Pressure hPa rack travel mm Tolerance mm	: 420 : 13.35 : +- 0.05
Pressure hPa	: 300

rack travel mm Tolerance mm	: 12.55 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.95 : 1042 : + 8
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 275 : 6.10 : + 0.10 : 17.0 : + 3.0 : + 6.0 : 8.0 : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 : ISO 4113 Test oil

Combination No. : 0402646988

Injection pump

Pump designation : PE6P120A320RS7230

: -10x

EP type number : 0412626899

Governor

Governer design. : RQV250...1000PA990K

Governer no. : 0421815274

Cust. part No. : 1250705/4

Customer—spec. information

Customer : DAF

: WS 295 L Motor

: 295.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm

: +- 0.10 test only

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.95 : + - 0.05Tolerance mm

Del. quantity

cm3/1000 strokes : 259.0

- :		
Tolerance cm3/1000 strokes	: +- 1.0	+ Rated speed rpm : 390 - guide sleeve
Check tolerance cm3/1000s.	: 4.0	travel mm : 3.79 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes	: 5.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s.	: 9.0	Tolerance mm : + 0.50
2nd speed rpm	: 250	GUIDE SLEEVE POSITION
End Speed (pill	. 250	Ţ
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: + 0.10	control lever position degree : - 1 Rated speed rpm : 1130
Tolerance	. 17.8	T Rack travel in mm : 13.50
cm3/1000 strokes Check tolerance		Tolerance mm : +- 1.30
cm3/1000s. Spreed	: +- 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes Check tolerance	: 8.0	Rated speed rpm : 980 Aneroid pressure
cm3/1000s.	: 12.0	hPa : 1500 Del. quantity
		+ cm3/1000 strokes : 259.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
WITH GOVERNOR		cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0
GUIDE SLEEVE TRAV	EL	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	EL : 250	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed
GUIDE SLEEVE TRAV	EL	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000S. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	EL : 250 : 1.53 : +- 0.10	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	EL : 250 : 1.53 : +- 0.10 : 1038 : 9.74	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	EL : 250 : 1.53 : +- 0.10 : 1038	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Guide sleeve Travel mm Tolerance mm Rated speed rpm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686 : 6.41	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032 Tolerance 1/min : + 5
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686 : 6.41 : + 0.25 : 284	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686 : 6.41 : + 0.25	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032 Tolerance 1/min : + 5
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686 : 6.41 : + 0.25 : 284 : 2.27	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : + 15 rack travel mm : 0.70
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	EL : 250 : 1.53 : + 0.10 : 1038 : 9.74 : + 0.10 : 686 : 6.41 : + 0.25 : 284 : 2.27 : + 0.25	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0 tolerance degree : + 4.0 rack travel mm : 12.95 Rated speed rpm : 1032 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : + 15

		Rated	speed rpm	: 980
LOW IDLE		Pressi	ure hPa	• 730
		rack	ure hPa travel mm ance mm	: 730 : 12.65
itrol lever		+ Tolera	ance mm	: ← 0.05
sition degree	: 70.0	+		
lerance degree	: 1- 4.0	+ Pressi	ure hPa	: 300
esting:		Toler:	travel mm ance mm	: 9.80 : + 0.10
000 1719.		Tiotera	ditce tikii	0.10
ated speed rpm	: 250	+		
ack travel mm olerance mm	: 5.20			
olerance mm	: +- 0.10	† FUEL I	DELIVERY CHA	RACTERISTIC:
ack travel mm	: 2.00	Aneroi	id pressure	
ack travel mm ated speed rpm	: 350	∔ hPa	•	: 1500
olerance 1/min	: +- 20	+ Rated	speed rpm	: 600
	450	+ Del. c	quantity	
Rated speed rpm	: 150		000 strokes	: 257.0
CRT mm min.	: > 7.00	+ Tolera	ance 300 strokes	٠ 4- 2 0
	1.00	T Check	tolerance	2.0
	·····		000s.	
ORQUE CONTROL		+ Spreed	Ė	
Datad amend	. 000	+ Tolera		
Rated speed rpm rack travel mm	: 980 : 13.95	+ cm3/1U	000 strokes	: 8.0
olerance mm	: + 0.05	T cm3/10	tolerance 100s.	: 12.0
= = च्या च्या स्थापना स्थापनी		1 (11)		. 12.0
Rated speed rpm	: 600	+ Aneroi	id pressure	
rack travel mm Tolerance mm	: 12.35	∔ hPa	·	: -
olerance mm	: +- 0.05	+ Rated	speed rpm	: 600
Rated speed rpm	: 825	† Del. q	quantity	. 4/5.0
ack travel mm		† cm3/10 † Tolera	000 strokes	. 105.0
olerance mm			000 strokes	: +- 10
		- Check	tolerance	
Rated speed rpm	: 400	+ cm3/10	100s.	: +- 4.0
ack travel mm		†		
olerance mm	נור.ט 🕶	BREAKA	MAY	
		T OKEARA	WM I	
NEROID/ALTITUDE		+		
OMPENSATOR TEST			ravel in mm	
			speed rpm	
ETTING		† Tolera	nce 1/min	: +- 5
- 1 1 TIAO		Ī		
ated speed rpm	: 980	1		
ressure hPa	: 1500	+		
ack travel mm	: 13.95	+		
olerance mm	: +- 0.05	+ 1211-221		
EASUREMENT		+ LOW IDI	Lt	
FURCUELIEIAE		I Pated	speed rpm	: 250
ressure hPa	: -		ravel mm	: 6.10
ated speed rpm	980		nce mm	: +- 0.10
ack travel mm	: 8.90	+ Del. qu	uantity	
olerance mm	: ← 0.10	+ cm3/100	00 strokes	: 17.0

D15

Tolerance		
cm3/1000 strokes	: +	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	•	12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 12.12.94 Test oil : ISO 4113 Combination No. : 0402646992 Injection pump Pump designation : PE6P120A720RS7021 EP type number : 0412626869 Governor Governer design. : RQ200/1000PA1036 Governer no. : 0421801649 Cust. part No. : 1363610 Customer-spec. information Customer : SCANIA Motor : DSI11E01 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Test nozzle holde : 1688901104 assembly Opening pressure bar Tolerance bar Test lines : 1680750008 Outside diameter 6.0

x inside diameter:

017

2.0

REMARKS	
Check and set without ROBO diaphraga	ım
(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values	
BEGINNING OF DELIVERY	
Test pressure bar : 31.0 Tolerance bar : + 1.0	
Prestroke mm : 5.05 Tolerance mm : + 0.05	
test only : \leftarrow 0.10	
Rack travel in mm : 10.50 Tolerance mm : + 1.50	
Firing order : 1-5-3-6-2-	-
Phasing : 0-60-120-180-240 : -300 : -0.30 Check tolerance °NW : +- 0.75	
BEGINNING OF DELIVERY DIFFERENCE	
Time to cyl. no. : 1	
BASIC SETTING	_
Rated speed rpm : 700	
Rack trayel in mm : 13.45 Tolerance mm : + 0.05	
Del. quantity cm3/1000 strokes : 258.0	

x length mm :

600

Tolerance cm3/1000 strokes	: ← 1.0 ‡	Rated speed rpm : 1460 guide sleeve
Check tolerance cm3/1000s.	: + 4.0	travel mm : 11.50 Tolerance mm : \(\to \) 0.50
Spreed		
Tolerance cm3/1000 strokes	: 8.0	GUIDE SLEEVE POSITION
Check tolerance		Rated speed rpm : 600
	: 12.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
2nd speed rpm	: 250	
Rack travel in mm : Tolerance mm :	: 6.30 : + 0.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : Tolerance	: 31.0	Rated speed rpm : 700 Aneroid pressure
cm3/1000 strokes :	: + 3.0	hPa : - Del. quantity
Check tolerance cm3/1000s. :	+ 6.0	cm3/1000 strokes : 258.0 Tolerance
Spreed	+	cm3/1000 strokes : + 1.0
Tolerance cm3/1000 strokes :	4.0	Check tolerance cm3/1000s. : +- 4.0
Check tolerance cm3/1000s. :	8.0	Spreed
cm3/10003	- 0.U	Tolerance cm3/1000 strokes : 8.0
(B) SETTING OF INJE	ECTTON PI IMP	Check tolerance cm3/1000s. : 12.0
WITH GOVERNOR	T T	cm3/1000s. : 12.0
		RATED SPEED
GUIDE SLEEVE TRAVEL	. +	
Rated speed rpm : guide sleeve	250	control lever position degree : 43.0
travel mm :	1.08 + 0.10	tolerance degree : +- 4.0
Rated speed rpm :	1054	control lever position degree : 98.0
avida chaqua	4	tolerance degree : +- 4.0
travel mm : Tolerance mm :	4.39 + 0.10	rack travel mm : 12.40
Rated speed rpm :	1000	Rated speed rpm : 1045 Tolerance 1/min : +- 5
guide sleeve travel mm :	4.00	rack travel mm : 4.00
	+ 0.10	Rated speed rpm : 1200 Tolerance 1/min : + 15
Rated speed rpm : guide sleeve	353	
travel mm :	3.46	rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm :	+ 0.10	Rated speed rpm : 1300
	420	I OU TOUT
guide sleeve travel mm :	4.00	FOM IDE
	+ 0.10	

D18

control lever position degree : tolerance degree : control lever position degree : tolerance degree : tolera	L / O	Aneroid pressure hPa : - Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 227.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 6.0
Rated speed rpm : rack travel mm : folerance mm : frack travel mm : Rated speed rpm : Tolerance 1/min : frack travel rpm : Rated speed rpm : Rated speed rpm : rack travel mm : frack travel mm	6.30 0.10 2.00 350 - 30 150	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 268.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0
CRT mm min. :> TORQUE CONTROL Rated speed rpm : rack travel mm : Tolerance mm : +	1000	Rack travel in mm : 12.40 Rated speed rpm : 1045 Tolerance 1/min : + 5
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa :	500 1500 13.45 - 0.05	Rated speed rpm : 100 rack travel mm : 12.90 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0
Rated speed rpm : rack travel mm : + Rated speed rpm : + Pressure hPa : rack travel mm :	500 12.90 - 0.20 500 235 13.25 - 0.05	Rated speed rpm : 250 rack travel mm : 6.30 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 泡.12.94 Edition : 1so 4113 Test oil

Combination No. : 0402648836

Injection pump

Pump designation : PE8P120A720LS7125

: -10T

EP type number : 0412628890

Governor

Governer design. : RQV200...950PA736-4

Governer no. : 0421813646

Cust. part No. : 397963

Customer-spec. information : SCANIA Customer

Motor : DSC14 03 L09,L10

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar :

Test nozzle holde

: 1688901019 assembly

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ___

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm 5.05 : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : + - 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 13.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 222.0

Tolerance + 1.0 +	
Check tolerance	RATED SPEED
cm3/1000s. : +- 4.0	control lever
Tolerance cm3/1000 strokes : 6.0	position degree : 60.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	position degree : 115.0 tolerance degree : + 4.0
Del. quantity cm3/1000 strokes : 18.0 Tolerance	rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed	rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 65.0 tolerance degree : + 4.0
control lever position degree : -1 Rated speed rpm : 1040	<pre>control lever position degree : 11.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 16.50	Testing:
Tolerance mm : + 1.30	Rated speed rpm : 225 rack travel mm : 5.00 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	rack travel mm : 2.00
Rated speed rpm : 700 Aneroid pressure hPa : 900	Rated speed rpm : 390 Tolerance 1/min : +- 30
Del. quantity cm3/1000 strokes : 222.0	Rated speed rpm : 100
Tolerance cm3/1000 strokes : +- 1.0	CRT mm min. ; > 6.50
Check tolerance cm3/1000s. : +- 4.0	TORQUE CONTROL
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : +- 0.05
cm3/1000s. : 9.0	TOCCI MITTOC IIRII

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 13.85 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 10.80 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 325 : 11.50 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 445 : 12.95 : + 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 950
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 900 : 950 : 215.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 900 : 950 : 215.0 : ← 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 900 : 950 : 215.0 : ← 4.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 900 : 950 : 215.0 : ← 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 900 : 950 : 215.0 : ← 4.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes	: 900 : 950 : 215.0 : ← 4.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 900 : 950 : 215.0 : ← 4.0 : ← 6.0 : 500 : 140.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	 900 950 215.0 + 4.0 + 6.0 500 140.0 + 2.0

Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Rated speed rpm :

995

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 12.12.94 : ISO 4113

Combination No. : 0402648839

Injection pump

Pump designation : PE8P120A720LS7125

: -10T

EP type number : 0412628890

Governor

Governer design. : RQV200...950PA736-1

Governer no.

: 0421813551

Cust. part No. : 380804

Customer-spec. information Customer : SCANIA

Motor

: DSC14 03

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

208.5

Tolerance bar

Test lines

: 1680750015

Outside diameter :

6.0

x inside diameter :

1.5

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x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +-

Prestroke mm 5.05

: + - 0.05Tolerance mm

test only : + - 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order

: - 5- 6- 8

: 0-45-90-135-180 : -225-270-315 Phasing

Tolerance : +- 0.30

Check

tolerance "NW : + - 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm : 13.85

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

222.0

Tolerance cm3/1000 strokes	: : +- 1.0 ‡	
Check tolerance cm3/1000s.	: + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes	: 6.0	control lever position degree : 60.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s.	: 9.0	control lever position degree : 95.0 tolerance degree : +- 4.0
Del. quantity cm3/1000 strokes Tolerance	+	rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5
cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1125
Spreed Tolerance cm3/1000 strokes Check tolerance	: 3.0	Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
cm3/1000s.	: 6.0	Rated speed rpm : 1250
(B) SETTING OF IN WITH GOVERNOR	WECTION PUMP	LOW IDLE
GUIDE SLEEVE POSI	ITION	control lever position degree : 44.0 tolerance degree : +- 4.0
control lever position degree Rated speed rpm		control lever position degree : 10.0 tolerance degree : +- 4.0
Rack travel in mm		Testing:
Tolerance mm	: + 1.30	Rated speed rpm : 225 rack travel mm : 5.00 Tolerance mm : +- 0.10
Rated speed rpm	Y AT FULL LOAD STOP : 700	rack travel mm : 2.00 Rated speed rpm : 390
Aneroid pressure hPa	: 900	Tolerance 1/min : +- 30
Del. quantity cm3/1000 strokes	: 222.0	Rated speed rpm : 125
Tolerance cm3/1000 strokes	: + 1.0	CRT mm min. : > 6.00
Check tolerance cm3/1000S. Spreed	: + 4.0	TORQUE CONTROL
Tolerance cm3/1000 strokes Check tolerance	: 6.0	Rated speed rpm : 950 rack travel mm : 13.85 Tolerance mm : +- 0.05
cm3/1000s.	: 9.0	TOTAL TOTAL THE THE THE THE TENT

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 900 rack travel mm 13.85 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 rack travel mm 11.40 Tolerance mm 0.20

Rated speed rpm 500

Pressure hPa 215 rack travel mm 12.00 Tolerance mm : + 0.15

Pressure hPa 365 rack travel mm 12.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 900 950 Rated speed rpm Del. quantity

cm3/1000 strokes : Tolerance

cm3/1000 strokes : +-4.0

215.0

Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes 2.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm : 12.80 Rated speed rpm : 995

Tolerance 1/min : +-5

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : **←** 0.50 Del. quantity cm3/1000 strokes 265.0

Tolerance

cm3/1000 strokes : +- 20.0 Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.0

Spreed Tolerance

cm3/1000 strokes : 3.0 Check tolerance

cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.12.94 : ISO 4113

Combination No.

: 0402648866

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number

: 0412628891

Governor

Governer design. : RQV350...1050PA795

: -7

Governer no.

: 0421813768

Cust. part No. : 1305128

Customer-spec. information Customer

: SCANIA

Motor

: DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

208.5

Tolerance bar

Test lines

: 1680750015

Outside diameter :

6.0

x inside diameter :

1.5

x length mm :

600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm

: 1-2-7-3-4 :-5-6-8 Firing order

Phasing : 0-45-90-135-180

: -225-270-315 : + - 0.30Tolerance

Check

tolerance °NW

: +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 13.55

Tolerance mm

Del. quantity cm3/1000 strokes	: 215.0	Check tolerance cm3/1000s.	: 9.0
Tolerance cm3/1000 strokes	: ← 1.0	RATED SPEED	
-	: +- 4.0	control lever position degree	: 48.0
Spreed Tolerance cm3/1000 strokes	: 6.0	tolerance degree	
Check tolerance cm3/1000s.	9.0	position degree tolerance degree	: + 104.0 : + 4.0
Del. quantity cm3/1000 strokes Tolerance	: 17.0	rack travel mm Rated speed rpm Tolerance 1/min	: 1095
cm3/1000 strokes : Check tolerance cm3/1000s.	: ← 2.0 : ← 4.0	rack travel mm [*] Rated speed rpm Tolerance 1/min	: 1215
Spreed Tolerance cm3/1000 strokes : Check tolerance	1	rack travel mm Tolerance mm Rated speed rpm	
cm3/1000S. :	‡	LOW IDLE	
WITH GOVERNOR GUIDE SLEEVE POSITI	(00)	control lever position degree tolerance degree	
control lever position degree :	1 - 1 I	control lever position degree tolerance degree	
Rated speed rpm :	+	Testing:	
Rack travel in mm : Tolerance mm :		Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.70 : + 0.10
FULL LOAD DELIVERY	AT FULL LOAD STOP	rack travel mm Rated speed rpm	: 2.00 : 400
Rated speed rpm : Aneroid pressure	700	Tolerance 1/min	: + 30
hPa : Del. quantity	900	•	: 100
cm3/1000 strokes : Tolerance	1	CRT mm min.	: > 10.50
cm3/1000 strokes : Check tolerance cm3/1000s. :	+ 1.0 + 4.0	TORQUE CONTROL	
Spreed Tolerance cm3/1000 strokes :		Rated speed rpm rack travel mm Tolerance mm	: 13.55
	1		

SETTING

Rated speed rpm 500 Pressure hPa 900 rack travel mm 13.55 Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 rack travel mm 11.40 Tolerance mm 0.20

Rated speed rpm 500

Pressure hPa 215 rack travel mm 11.90 Tolerance mm : + 0.15

Pressure hPa 365 rack travel mm 12.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 900 Rated speed rpm 950

Del. quantity cm3/1000 strokes

207.0 Tolerance

4.0

cm3/1000 strokes Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. : +-4.0

BREAKAWAY

Rack travel in mm: 12.50 Rated speed rpm : 1095

Tolerance 1/min : +-5

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402648869

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number : 0412628891

Governor

Governer design. : RQV200...1050PA736

: -7

Governer no. : 0421813771

Cust. part No. : 1305137

Customer—spec. information Customer : SCANIA Motor : DS14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901019

Opening pressure

Tolerance bar : ± 1.5

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.55 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 215.0	Check tolerance cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : + 1.0	RATED SPEED
Check tolerance cm3/1000s. : + 4.0	control lever position degree : 62.0
Spreed Tolerance cm3/1000 strokes : 6.0	tolerance degree : +- 4.0
Check tolerance	control lever position degree : 99.0 tolerance degree : + 4.0
cm3/1000s. : 9.0	rack travel mm : 12.50
Del. quantity cm3/1000 strokes : 18.0 Tolerance	Rated speed rpm : 1095 Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1215
cm3/1000S. : + 4.0 Spreed Tolerance	Tolerance 1/min : +- 15 rack travel mm : 0.50
cm3/1000 strokes : 3.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350
cm3/1000s. : 6.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	control lever position degree : 44.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
control lever position degree : -1	position degree : 10.0 tolerance degree : +- 4.0
Rated speed rpm : 1100	Testing:
Rack travel in mm : 16.50 Tolerance mm : + 1.30	Rated speed rpm : 225 rack travel mm : 5.00 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 410
Rated speed rpm : 700 Aneroid pressure	Tolerance 1/min : +- 30
nPa : 900	Rated speed rpm : 100
cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 1.0	CRT mm min. : > 6.50
Check tolerance cm3/1000s. : + 4.0	TORQUE CONTROL
Spreed Tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 1050 rack travel mm : 13.55 Tolerance mm : +- 0.05
+	

: 500 : 900 : 13.55 : ← 0.05
: - : 500 : 11.40 : +- 0.20
: 500
: 215 : 12.00 : + 0.15
: 365 : 12.85 : + 0.05
RACTERISTICS
: 900 : 1050 : 212.0 : + 4.0 : + 6.0
: 1050 : 212.0 : + 4.0 : + 6.0
: 1050 : 212.0 : + 4.0
: 1050 : 212.0 : + 4.0 : + 6.0 : 500

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0

E04

Rack travel in mm :

Rated speed rpm :

12.50

1095

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 : ISO 4113 Test oil

Combination No. : 0402648883

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number : 0412628891

Governor

Governer design. : RQV300...900PA795

: -11

Governer no. : 0421813847

Cust. part No. : 1305129

Customer-spec. information Customer : SCANIA Motor : DS14 48M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar 1.5 Tolerance bar

Tolerance L/h : +- 10.0

Test nozzle holde

: 1688901019 assembly

Opening pressure

bar Tolerance bar

Lube oil : 1409918004 Test lines : 1680750015

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm : **←** 0.05

test only : ← 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4 : - 5- 6- 8

: 0-45-90-135-180 : -225-270-315 Phasing

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

700 Rated speed rpm

Rack travel in m	. 17 55	+ guide sleeve
Tolerance mm		travel mm : 2.04
(Oceranice man	0.05	† Tolerance mm : +- 0.25
Del. quantity		Rated speed rpm : 395
cm3/1000 strokes	: : 215.0	guide sleeve
		travel mm : 2.62
Tolerance		+ Tolerance mm : + 0.25
cm3/1000 strokes	: +- 1.0	+
Check tolerance		Rated speed rpm : 450
cm3/1000s.	: +- 4.0	guide sleeve
UIID / 10000 .	4.0	+ travel mm : 3.12 - Tolerance mm : + 0.25
Spreed		Total arte IIII . += 0.25
Tolerance		Rated speed rpm : 1190
cm3/1000 strokes	: 6.0	† guide sleeve
Ole i i i		+ travel mm : 11.50
Check tolerance		+ Tolerance mm : +- 0.50
cm3/1000S.	: 9.0	†
2nd speed rpm	: 300	GUIDE SLEEVE POSITION
tria speca i pili	. 300	I GOIDE SPEENE LOSTITON
Rack travel in m	m: 4.80	1
Tolerance mm	: +- 0.30	+ control lever
Del. quantity		<pre>† position degree : − 1</pre>
cm3/1000 strokes	: 17.0	+ Rated speed rpm : 1035
Tolerance cm3/1000 strokes	: + 2.0	David to 10 50
Check tolerance	. — 2.0	Rack travel in mm : 12.50 Tolerance mm : + 1.30
cm3/1000s.	: +- 4.0	T roterance limit : 1.50
Spreed		
Tolerance		+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 3.0	+
Check tolerance	4.5	Rated speed rpm : 700
cm3/1000s.	: 6.0	Aneroid pressure
		hPa ; -
(B) SETTING OF IN	VIECTION PIEMP	+ Del. quantity + cm3/1000 strokes : 215.0
WITH GOVERNOR	02011014 1 01 #	Tolerance
		+ cm3/1000 strokes : +- 1.0
		- + Check tolerance
GUIDE SLEEVE TRAV	/EL	$+$ cm3/1000s. : \leftarrow 4.0
Dated aread	. 700	+ Spreed
Rated speed rpm guide sleeve	: 300	† Tolerance
travel mm	: 1.56	cm3/1000 strokes : 6.0 Check tolerance
Tolerance mm	: + 0.15	- cm3/1000s. : 9.0
		. ,,,
Rated speed rpm	: 960	
guide sleeve		- RATED SPEED
travel mm	8.18	+
Tolerance mm	: +- 0.20	†
Rated speed rpm	: 688	control lever
guide sleeve	. 000	<pre>position degree : 47.0 tolerance degree : +- 4.0</pre>
travel mm	: 5.27	toter arice degree . ** 4.0
Tolerance mm	: +- 0.25	control lever
	=	position degree : 105.0
Rated speed rpm	: 345	+ tolerance degree : +- 4.0
		+

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 945 : + 5 : 4.00 : 1040 : + 15 : 0.50 : + 0.50	† † † † †	Pressure hPa Rated speed rpm : 500 rack travel mm : 11. Tolerance mm : + 0. Rated speed rpm : 500 Pressure hPa rack travel mm : 12. Tolerance mm : + 0. Pressure hPa rack travel mm : 12. Tolerance mm : + 0.	35 20 , 00 15
LOW IDLE		† †	Tolerance mm : +- 0.	05
control lever position degree tolerance degree	: 73.0 : +- 4.0	++	FUEL DELIVERY CHARACTERIST	ICS
control lever position degree tolerance degree Testing:	: 15.0 : + 4.0	† † † †	Aneroid pressure hPa : - Rated speed rpm : 850 Del. quantity cm3/1000 strokes : 209 Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.80 : + 0.10	† † †	cm3/1000 strokes : +- 4 Check tolerance cm3/1000S. : +- 6	<u>-</u>
Rated speed rpm	: 175	‡	Aneroid pressure hPa :	
CRT mm min.	: > 6.30	‡	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.	
CONTINUOUS-ACTION	CONTROL	+	Tolerance cm3/1000 strokes : +- 2.	
Rated speed rpm	: 325	† + +	Check tolerance cm3/1000S. : +- 4.	0
TORQUE CONTROL			BREAKAWAY	
Rated speed rpm rack travel mm Tolerance mm		 ‡	Rack travel in mm : 12.5 Rated speed rpm : 945 Tolerance 1/min : +-	50 5
ANEROID/ALTITUDE COMPENSATOR TEST		† †	STARTING FUEL DELIVERY	
SETTING		‡	Rated speed rpm : 100 rack travel mm : 20.5	Ω
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.55	+++++++++++++++++++++++++++++++++++++++	Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 265.	0
	: 0.05	‡	Tolerance cm3/1000 strokes : +- 20.	0
MEASUREMENT		‡	Check tolerance cm3/1000S. : +- 24.0	0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: +-	300 4.80 0.30
Del. quantity cm3/1000 strokes Tolerance	:	17.0
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s.	: +-	4.0
Tolerance cm3/1000 strokes	:	3.0
Check tolerance cm3/1000s.	:	6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.12.94

Test oil

: ISO 4113

Combination No.

: 0402648891

Injection pump

Pump designation : PE8P120A720LS7189

: -10Q

EP type number

: 0412628894

Governor

Governer design.

: RQV200...950PA736-8

Governer no.

: 0421813815

Cust. part No. : 1316120

Customer-spec. information Customer : SCANIA

Motor

: DSC14 08

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1417413025

Inlet press. bar

2.5

Tolerance bar

0.1

Tolerance 1/h

: + 20.0

Test nozzle holde assembly

: 1688901104

Opening pressure

bar

251.5

Tolerance bar

Test lines

: 1680750008

Outside diameter : 6.0

x inside diameter:

2.0

x length mm :

600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-1.0

Prestroke mm 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 : ← 0.30

Check

Tolerance

tolerance °NW : + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

700

Rack travel in mm: 12.35

Tolerance mm

: +- 0.05

Del. quantity cm3/1000 strokes : 220.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : +- 1.0 -	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	- control lever - position degree : 60.0 - tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 12.0	control lever
2nd speed rpm : 250	position degree : 94.0 tolerance degree : +- 4.0
Rack travel in mm: 4.50 Tolerance mm: + 0.30 Del. quantity	rack travel mm : 11.30 Rated speed rpm : 995 Tolerance 1/min : +- 5
cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1105 Tolerance 1/min : +- 15
cm3/1000s. : ← 6.0 Spreed Tolerance cm3/1000 strokes : 4.0	- rack travel mm : 0.50 - Tolerance mm : + 0.50 - Rated speed rpm : 1250
Check tolerance cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 45.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 11.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1150	Testing:
Rack travel in mm: 9.50 Tolerance mm: + 2.50	Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 700	CRT mm min. :> 5.80
Aneroid pressure + + + + + + + + + + + + + + + + + + +	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 220.0 Tolerance	Rated speed rpm : 275
cm3/1000 strokes : +- 1.0	TORQUE CONTROL

Rated speed rpm : 950 rack travel mm : 12.35 Tolerance mm : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST
SETTING
Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.35 Tolerance mm : + 0.05
MEASUREMENT
Pressure hPa : - Rated speed rpm : 500 rack travel mm : 10.00 Tolerance mm : + 0.20
Rated speed rpm : 500
Pressure hPa : 320 rack travel mm : 10.50 Tolerance mm : +- 0.20
Pressure hPa : 525 rack travel mm : 11.75 Tolerance mm : + 0.05
FUEL DELIVERY CHARACTERISTICS
Aneroid pressure hPa : - Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 206.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0
Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
BREAKAWAY

Rack travel in mm : 11.30 Rated speed rpm : 995 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: +-	250 4.50 0.30
Del. quantity cm3/1000 strokes Tolerance	:	16.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance		, 0
cm3/1000 strokes Check tolerance	•	4.0
cm3/1000s.	:	8.0

BOSCH INJ. PUMP	TEST SPECIFICATIONS		
Note remarks			
Refer to Service Info for test and adjustment instructions. See microcard(s) W400/			
Edition Test oil	: 16.12.94 : ISO 4113		
Combination No.	: 0402648961		
Injection pump Pump designation	: -10		
EP type number	: 0412628893		
Governor design. Governer no.	: RQV3501050PA795 : -16 : 0421814054		
Cust. part No.			
Customer-spec. in Customer Motor	formation : SCANIA : DSI1457M		
Customer	: SCANIA : DSI1457M		
Customer Motor	: SCANIA : DSI1457M		
Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C	: SCANIA : DSI1457M EMENTS : 40 : +- 2.0		
Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C Tolerance °C	: SCANIA : DSI1457M : DSI1457M : #0 : +- 2.0 : 1417413025		
Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C Tolerance °C Overflow valve	: SCANIA : DSI1457M EMENTS : 40 : +- 2.0 : 1417413025 : 2.5 : +- 0.1		
Customer Motor TEST BENCH REQUIR Test oil inlet temp. °C Tolerance °C Overflow valve Inlet press. bar Tolerance bar	: SCANIA : DSI1457M EMENTS : 40 : +- 2.0 : 1417413025 : 2.5 : +- 0.1		

```
Outside diameter : 6.0
 x inside diameter :
                        2.0
 x length mm :
 REMARKS
  Check and set without ROBO diaphragam
 (A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
                      31.0
Tolerance bar : +- 1.0
Prestroke mm
                      5.05
                 : ← 0.05
Tolerance mm
test only
                : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
                : 1-2-7-3-4
:-5-6-8
Firing order
Phasing
                : 0-45-90-135-180
                : -225-270-315
                : + 0.30
Tolerance
Check
tolerance ^{\circ}NW : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
Rated speed rpm :
                     700
```

Rack travel in mm: 13.25

Tolerance mm : + 0.05

Test lines : 1680750008

1	
Del. quantity cm3/1000 strokes : 244.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance	cm3/1000s. : 12.0
Spreed	RATED SPEED
Tolerance cm3/1000 strokes : 8.0	control lever position degree : 47.0
Check tolerance cm3/1000S. : 12.0	tolerance degree : +- 4.0
2nd speed rpm : 350	control lever position degree : 105.0 tolerance degree : +- 4.0
Rack travel in mm: 4.60 Tolerance mm: + 0.30	rack travel mm : 12.20
Del. quantity cm3/1000 strokes : 21.0 Tolerance	Rated speed rpm : 1095 Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	rack travel mm : 4.00 Rated speed rpm : 1210
Spreed Tolerance	Tolerance 1/min : + 15 rack travel mm : 0.50
cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	Tolerance mm : +- 0.50 Rated speed rpm : 1350
‡	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	control lever position degree : 73.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
control lever position degree : -1	position degree : 15.0 tolerance degree : +- 4.0
Rated speed rpm : 1150 + Rack travel in mm : 16.50 +	Testing:
Tolerance mm : + 1.30	Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250
Rated speed rpm : 700 Aneroid pressure hPa : -	CRT mm min. : > 7.50
Del. quantity cm3/1000 strokes : 244.0	CONTINUOUS-ACTION CONTROL
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 325

TORQUE CONTROL

Rated speed rpm 1050 13.25 rack travel mm Tolerance mm 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1500 rack travel mm 13.25 : +- 0.05 Tolerance mm

MEASUREMENT

Pressure hPa Rated speed rpm 500 10.00 rack travel mm Tolerance mm 0.20

Rated speed rpm 500

Pressure hPa 320 rack travel mm 10.50 Tolerance mm : + 0.20

Pressure hPa 525 11.75 rack travel mm Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa

Rated speed rpm 1050

Del. quantity cm3/1000 strokes : 222.0

Tolerance cm3/1000 strokes 4.0

Check tolerance cm3/1000s. 8.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 144.0 Tolerance

cm3/1000 strokes : +-1.0 Check tolerance

cn:3/1000s. 4.0

BREAKAWAY

Rack travel in mm : 12.20 Rated speed rpm : 1095 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 10.00 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : +-20.0Check tolerance

cm3/1000s. : **←** 24.0

LOW IDLE

Rated speed rpm 350 rack travel mm 4.60 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648962

Injection pump

Pump designation : PE8P12OA72OLS7189

: -10

EP type number : 0412628893

Governor

Governer design. : RQV300...900PA795

: -18

Governer no. : 0421814059

Cust. part No. : 1340520

Customer—spec. information Customer : SCANIA Motor : D 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50Tolerance mm : \leftarrow 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : \leftarrow 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.25
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 216.0	guide sleeve travel mm : 8.00 Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0 Check tolerance	GUIDE SLEEVE POSITION
cm3/1000s. : + 4.0	control lever
Tolerance cm3/1000 strokes : 8.0	position degree : - 1 Rated speed rpm : 1280
Check tolerance cm3/1000s. : 12.0	Rack travel in mm : 12.00 Tolerance mm : + 1.30
2nd speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.60 Tolerance mm : + 0.30 Del. quantity	Rated speed rpm : 700 Aneroid pressure hPa : -
cm3/1000 strokes : 21.0 Tolerance	Del. quantity cm3/1000 strokes : 216.0
cm3/1000 strokes : + 3.0 Check tolerance	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000S. : + 6.0 Spreed Tolerance	Check tolerance cm3/1000s. : +- 4.0
cm3/1000 strokes : 4.0 Check tolerance	Spreed Tolerance cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance cm3/1000s. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 300 guide sleeve	position degree : 46.0 tolerance degree : +- 4.0
travel mm : 1.60 + Tolerance mm : + 0.20 +	control lever position degree : 104.0
Rated speed rpm : 1045 guide sleeve	tolerance degree : +- 4.0 rack travel mm : 11.20
travel mm : 9.50 Tolerance mm : + 0.20	Rated speed rpm : 945 Tolerance 1/min : + 5
Rated speed rpm : 350 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1025
travel mm : 2.20 + Tolerance mm : + 0.30 +	Tolerance 1/min : +- 15
Rated speed rpm : 650 guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1150
travel mm : 5.00 Tolerance mm : + 0.30	nated speed (pill . 11)0
Rated speed rpm : 950	LOW IDLE

	İ
control lever position degree : 73.0 tolerance degree : +- 4.0	FUEL DELIVERY CHARACTERISTICS
control lever position degree : 15.0 tolerance degree : +- 4.0	Aneroid pressure hPa : - Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 204.0
Testing:	+ loterance
Rated speed rpm : 300 rack travel mm : 4.60 Tolerance mm : + 0.10	cm3/1000 strokes : + 4.0 Check tolerance cm3/1000S. : + 8.0
Rated speed rpm : 200	Aneroid pressure hPa : -
CRT mm min. : > 7.50	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0
CONTINUOUS-ACTION CONTROL	Tolerance cm3/1000 strokes : + 1.0
Rated speed rpm : 290	Check tolerance cm3/1000s. : + 4.0
TORQUE CONTROL	BREAKAWAY
Rated speed rpm : 900 rack travel mm : 12.25 Tolerance mm : + 0.05	Rack travel in mm : 11.20 Rated speed rpm : 945 Tolerance 1/min : + 5
ANEROID/ALTITUDE COMPENSATOR TEST	STARTING FUEL DELIVERY
SETTING	+ Rated speed rpm : 100
Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.25 Tolerance mm : + 0.05	rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 160.0 Tolerance
MEASUREMENT	cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa : - Rated speed rpm : 500 rack travel mm : 10.00 Tolerance mm : + 0.20	cm3/1000s. : +- 24.0
Rated speed rpm : 500	LOW IDLE
Pressure hPa : 320 rack travel mm : 10.50 Tolerance mm : + 0.20	Rated speed rpm : 300 rack travel mm : 4.60 Tolerance mm : + 0.30 Del. quantity
Pressure hPa : 525 rack travel mm : 11.75 Tolerance mm : +- 0.05	- cm3/1000 strokes : 21.0 - Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000S. : +- 6.0

Spreed
Tolerance
cm3/1000 strokes :
Check tolerance
cm3/1000s. :

8.0

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648966

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0412628893

Governor

: RQV350...1050PA795 Governer design.

: -19

Governer no. : 0421814057

Cust. part No. : 1340523

Customer-spec. information : SCANIA Customer Motor : DSI1458M

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1688901104

Opening pressure

Tolerance bar : +- 1.5

Lube oil : 1409918004 Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ___

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.05 : + - 0.05Tolerance mm

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order : - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 : + 0.30Tolerance

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

Rack travel in mm Tolerance mm		guide sleeve travel mm : 2.64 Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes	: 252.0	Rated speed rpm : 520 guide sleeve
Tolerance cm3/1000 strokes	: +- 1.0	travel mm : 3.19 Tolerance mm : + 0.25
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 1390 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes	: 8.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 12.0	control lever position degree : - 1
Del. quantity cm3/1000 strokes Tolerance	: 21.0	Rated speed rpm : 1210
cm3/1000 strokes Check tolerance cm3/1000s.		Rack travel in mm: 12.60 Tolerance mm: + 1.30
Spreed Tolerance	: +- 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance cm3/1000s.	: 4.0 : 8.0	+ Rated speed rpm : 700 + Aneroid pressure + hPa : -
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
GUIDE SLEEVE TRAVE	L	
Rated speed rpm guide sleeve travel mm	: 350	cm3/1000 strokes : 8.0 Check tolerance
	: 1.44 : + 0.20	- cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm	: 1108 - : 8.05 -	RATED SPEED
Tolerance mm	: +- 0.15	control lever position degree : 48.0
Rated speed rpm guide sleeve travel mm	: 781 : 5.24	tolerance degree : +- 4.D control lever
	: +- 0.25 : 411	position degree : 107.0 tolerance degree : +- 4.0
guide sleeve travel mm	: 2.06 : ← 0.25	rack travel mm : 12.60 Rated speed rpm : 1095 Tolerance 1/min : +- 5
	: 461	rack travel mm : 4.00
E20		

Rated speed rpm Tolerance 1/min	: 1220 : + 15
rack travel mm Tolerance mm Rated speed rpm	: ← 0.50
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 15.0 : ← 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
Rated speed rpm	: 250
CRT mm min.	: > 7.50
CONTINUOUS-ACTION	CONTROL
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
MEASUREMENT	
Pressure hPa rack travel mm Tolerance mm	: 430 : 10.90 : ← 0.20
Pressure hPa	: 750 : 12.65

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	•	+-	1050 230.0 4.0 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	•	+	500 144.0 1.0 4.0
BREAKAWAY			

Rack travel in mm	•	12.60
Rated speed rpm	:	1095
Tolerance 1/min	•	+- 5

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 10.00 : + 0.20
cm3/1000 strokes Tolerance	: 160.0
cm3/1000 strokes Check tolerance	: + 20.0
cm3/1000s.	: +- 24.0

LOW IDLE

Bol grantity		
Del. quantity cm3/1000 strokes		21.0
Tolerance	•	21.0
cm3/1000 strokes	: +-	3.0
Check tolerance	• '	5.0
cm3/1000s.	. +	6.0
Spreed	• •	0.0
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance	•	
cm3/1000s.	•	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 21.12.94 Test oil : ISO 4113

Combination No. : 0402648973

Injection pump

Pump designation : PE8P120A320LS7873

EP type number : 0412628880

Governor

Governer design. : RQ300/950PA1121

: 0421801701 Governer no.

Cust. part No. : 04221534KY0165-17

Customer-spec. information

Customer : KHD

Motor : BF8M1015/C

Power KW : 400.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar

Lube oil : 1409918004

Test lines : 1680750075 Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

Check electrically unlatched starting fuel delivery (EES) with 24 volt.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 4.05 Tolerance mm : + - 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order

: 1-8-7-2-6 :-5-4-3

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance °NW : + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 15.35

Tolerance mm : \leftarrow 0.05

Del. quantity		Rated speed rpm : 450
cm3/1000 strokes	s : 380.0	+ guide sleeve + travel mm : 6.00
		+ Tolerance mm : + 0.10
Tolerance		+
cm3/1000 strokes	s : + 1.0	+ Rated speed rpm : 1150
Check tolerance		+ guide sleeve + travel mm : 11.50
cm3/1000s.	: +- 4.0	Tolerance mm : +- 0.50
Spreed Tolerance		CUITATE OF EACH COOKERS
cm3/1000 strokes	5.0	GUIDE SLEEVE POSITION
		1
Check tolerance		+ control lever
cm3/1000s.	: 9.0	position degree : - 1
2nd speed rpm	: 300	Rated speed rpm : 700
cha apeca i pii	. 500	Rack travel in mm: 20.00
Rack travel in m		Tolerance mm : + 0.80
Tolerance mm	: + 0.10	+
Del. quantity cm3/1000 strokes	s : 20.0	FULL LOAD DELIVERY AT FULL LOAD ST
Tolerance	. 20.0	T FOLL EDAD DELIVERY AT FULL EDAD ST
cm3/1000 strokes	: 3.0	Rated speed rpm : 950
Check tolerance		+ Aneroid pressure
cm3/1000s. Spreed	: 6.0	† hPa : 1600
Tolerance		+ Del. quantity + cm3/1000 strokes : 380.0
cm3/1000 strokes	: 8. 0	+ Tolerance
Check tolerance	40.0	+ cm3/1000 strokes : +- 1.0
cm3/1000s.	: 12.0	+ Check tolerance
		+ cm3/1000s. : + 4.0 + Spreed
(B) SETTING OF I	NJECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : 5.0
		+ Check tolerance
GUIDE SLEEVE TRAV	VFI	
Rated speed rpm	: 300	+ RATED SPEED
guide sleeve travel mm	. 227	†
Tolerance mm	: 2.23 : +- 0.10	t control lever
		position degree : 103.0
Rated speed rpm	: 1001	tolerance degree : +- 4.0
guide sleeve	. (7/	+
travel mm Tolerance mm	: 6.36 : + 0.10	+ rack travel mm : 14.30
. Jec. arioe min	0.10	Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm	: 950	1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
guide sleeve	. (00	+ rack travel mm : 4.00
travel mm Tolerance mm	: 6.00 : +- 0.10	Rated speed rpm : 1070
OLEI GILLE IIII	0.10	† Tolerance 1/min : +- 15
Rated speed rpm	: 385	rack travel mm : 0.50
guide sleeve		+ Tolerance mm : \leftarrow 0.50
travel mm	5.22	+ Rated speed rpm : 1150
Tolerance mm	: +- 0.10	1
		Т

		_
LOW IDLE		START CUT-OUT
control lever position degree tolerance degree	: 75.0 : + 4.0	Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220
Testing:		+ Check + speed 1/min : < 240
ated speed rpm ack travel mm olerance mm	: 300 : 5.00 : + 0.10	FUEL DELIVERY CHARACTERISTICS
ck travel mm ted speed rpm lerance 1/min	: 2.00 : 360 : ← 20	Aneroid pressure hPa : - Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 250.0
ed speed rpm		Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
ORQUE CONTROL		
ated speed rpm ack travel mm olerance mm	: 15.35	BREAKAWAY Rack travel in mm : 14.30 Rated speed rpm : 995
EROID/ALTITUDE MPENSATOR TEST		Tolerance 1/min : +- 5
ETTING		STARTING FUEL DELIVERY
ed speed rpm ssure hPa k travel mm erance mm	: 400 : 1600 : 15.35 : ← 0.05	Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 220.0
ASUREMENT		Tolerance cm3/1000 strokes : + 20.0
ssure hPa ed speed rpm k travel mm erance mm		Check tolerance cm3/1000s. : +- 24.0
ated speed rpm	: 400	LOW IDLE
essure hPa ck travel mm erance mm	: 570 : 11.85 : + 0.20	Rated speed rpm : 300 rack travel mm : 5.00 Tolerance mm : + 0.10
ressure hPa ack travel mm blerance mm	: 14.45	Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +- 3.0
		Check tolerance cm3/1000s. : + 6.0

Spreed
Tolerance
cm3/1000 strokes :
Check tolerance
cm3/1000s. : 8.0

12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 15.12.94 Test oil : ISO 4113 Combination No. : 0402648974 Injection pump Pump designation : PE8P120A320LS7875 EP type number : 0412628881 Governor Governer design. : RQ250/1150PA1122 Governer no. : 0421801704 Cust. part No. : Customer-spec. information Customer : DAEWOO Motor : V2-8TC TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar

: 1409918004

: 1680750089

8.0

```
x inside diameter :
                        3.0
 x length mm :
                      600
 REMARKS
 (A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar:
Tolerance bar : +- 1.0
Prestroke mm
Tolerance mm
test only
                 : + - 0.10
Rack travel in mm: 16.00
Tolerance mm
                 : +- 1.50
                 : 8-7-2-6-3
:-5-4-1
Firing order
Phasing
                : 0-45-90-135-180
                 : -225-270-315
Tolerance
                 : ← 0.30
Check
tolerance °NW
                 : + 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
                      8
BASIC SETTING
Rated speed rpm
                    1150
Rack travel in mm :
                     13.60
Tolerance mm
                : +- 0.05
Del. quantity
```

cm3/1000 strokes :

208.0

Tolerance bar

Outside diameter :

Lube oil

Test lines

		+ Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes	s : + 1.0	Rated speed rpm : 1370
Check tolerance cm3/1000s.	: +- 4.0	+ guide sleeve + travel mm : 11.50 + Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes	· 7.0	GUIDE SLEEVE POSITION Rated speed rpm : 600
Check tolerance cm3/1000s.	: 10.0	Rack travel in mm: 20.00
2nd speed rpm	: 300	Tolerance mm : +- 0.80
Rack travel in m Tolerance mm Del. quantity		FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150
cm3/1000 strokes Tolerance cm3/1000 strokes		Aneroid pressure hPa : - Del. quantity
Check tolerance cm3/1000s. Spreed	- · · -	+ cm3/1000 strokes : 208.0 + Tolerance
Tolerance cm3/1000 strokes Check tolerance		cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0
cm3/1000s.	: 8.0	+ Spreed + Tolerance + cm3/1000 strokes : 7.0
(B) SETTING OF IN	NJECTION PUMP	+ Check tolerance + cm3/1000S. : 10.0
GUIDE SLEEVE TRAN	VEL	RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm	: 2.39	control lever position degree : 34.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm		control lever position degree : 95.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve		rack travel mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : +- 8
travel mm Tolerance mm	: 6.00 : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1280
Rated speed rpm guide sleeve travel mm Tolerance mm		Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
		Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm guide sleeve		LOW IDLE
travel mm	: 6.00	+

control lever position degree : tolerance degree : +	75.0 - 4.0	START CUT-OUT
control lever	‡	Rated speed rpm : > 100 Check
position degree : tolerance degree : +	- 4.0 - 4.0 +	speed 1/min : > 80 Rated speed rpm : < 220
Testing:	Ī	Check speed 1/min : < 240
Rated speed rom :	300 I	
Rated speed rpm : rack travel mm : Tolerance mm : +	5.80 - 0.10	FUEL DELIVERY CHARACTERISTICS
	+	Aneroid pressure hPa : -
rack travel mm : Rated speed rpm :	375 I	hPa : - Rated speed rpm : 650 Del quantity
Tolerance 1/min : +	- 30 -	bee. additile
Rated speed rpm :	200	cm3/1000 strokes : 226.0 Tolerance
CRT mm min. :>	8.60	cm3/1000 strokes : +- 3.0 Check tolerance
		cm3/1000s. : +- 6.0
TORQUE CONTROL	<u>†</u>	Aneroid pressure hPa : -
Rated speed rpm : rack travel mm : Tolerance mm : +	650 T	Rated speed rpm : 500
rack travel mm :	13.60	Del. quantity cm3/1000 strokes : 137.0
folerance mm : +	- 0.05	cm3/1000 strokes : 13/.0 Tolerance
		cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE	+	Check tolerance
COMPENSATOR TEST	+	cm3/1000s. : +- 4.0
	+	
SETTING	<u>†</u>	BREAKAWAY
	500	BREAKAWAY
	500 1500	Rack travel in mm : 12.60
	500 1500 13.60	Rack travel in mm : 12.60 Rated speed rpm : 1202
SETTING Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : +-	500 1500 13.60 - 0.05	Rack travel in mm : 12.60
	500 1500 13.60 - 0.05	Rack travel in mm : 12.60 Rated speed rpm : 1202
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa :	- ‡	Rack travel in mm : 12.60 Rated speed rpm : 1202
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm :	500	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : +- 8 STARTING FUEL DELIVERY
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm :	- ‡	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : +- 8 STARTING FUEL DELIVERY Del. quantity
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : +	500 + 9.00	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm :	500 9.00 - 0.20 500	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa :	500 9.00 - 0.20 500	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa : Rated speed rpm :	500 9.00 - 0.20 500	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa : Rated speed rpm :	500 9.00 - 0.20 500 650 12.50	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + Pressure hPa : rack travel mm : Tolerance mm : +	500 9.00 - 0.20 500 650 12.50 - 0.20 250 10.00	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + Pressure hPa : rack travel mm : Tolerance mm : +	500 9.00 - 0.20 500 650 12.50 - 0.20	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + MEASUREMENT Pressure hPa : Rated speed rpm : rack travel mm : Tolerance mm : + Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm : + Pressure hPa : rack travel mm : Tolerance mm : +	500 9.00 - 0.20 500 650 12.50 - 0.20 250 10.00	Rack travel in mm : 12.60 Rated speed rpm : 1202 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000S. : + 14.0

Tolerance mm	: +-	0.20
Del. quantity cm3/1000 strokes	:	18.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +	6.0
Spreed Tolerance	•	0.0
cm3/1000 strokes	:	5.0
Check tolerance cm3/1000s.	:	8.0

x inside diameter : BOSCH INJ. PUMP TEST SPECIFICATIONS 2.0 x length mm : 600 Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... Check and set without ROBO diaphragam : 12.12.94 Edition : ISO 4113 Test oil Combination No. : 0402678818 (A) INJECTION PUMP SETTING VALUES Injection pump Set equal delivery quant. Pump designation : PE8P120A720LS7189 per values ____ : -10 : 0412628893 EP type number BEGINNING OF DELIVERY Governor : RSV350...1050P1A512 31.0 Governer design. Test pressure bar : : -4 Tolerance bar : + 1.0 : 0421833384 Governer no. 5.05 Prestroke mm : 1340526 Cust. part No. : + - 0.05Tolerance mm test only : + 0.10Customer-spec. information Rack travel in mm: 10.50 Customer : SCANIA : + 1.50 Tolerance mm Motor : D 14 : 1-2-7-3-4 :-5-6-8 Firing order TEST BENCH REQUIREMENTS : 0-45-90-135-180 : -225-270-315 Test oil inlet Phasing temp. °C Tolerance °C Tolerance : +- 0.30 Check tolerance °NW : +- 0.75 Overflow valve : 1417413025 BEGINNING OF DELIVERY DIFFERENCE Inlet press. bar : Tolerance bar Time to cyl. no. : Test nozzle holde : 1688901104 assembly BASIC SETTING Opening pressure 251.5 700 bar Rated speed rpm Tolerance bar : +- 1.5 Rack travel in mm : 12.25 Test lines : 1680750008 Tolerance mm : +- 0.05

F03

Outside diameter :

6.0

Del. quantity cm3/1000 strokes : 216.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000S. : + 4.0	cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Spreed Tolerance cm3/1000 strokes : 8.0	RATED SPEED
Check tolerance cm3/1000S. : 12.0	control lever
2nd speed rpm : 350	position degree : 63.0 tolerance degree : +- 4.0
Rack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 21.0	control lever position degree : 113.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 11.20 Rated speed rpm : 1095 Tolerance 1/min : + 5
cm3/1000S. : + 6.0 + Spreed + Tolerance cm3/1000 strokes : 4.0 + 6.0	rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15
Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 80.0 tolerance degree : + 4.0
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 30.0 tolerance degree : + 4.0
Tolerance mm : + 0.20	Setting point w/out bumper spring
governor spring pre-tension click setting x : 6.00	Rated speed rpm : 350 rack travel mm : 4.10
FULL LOAD DELTUEDY AT CHILL LOAD CTOD	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10
hPa : - Del. quantity cm3/1000 strokes : 216.0	rack travel mm : 2.00 Rated speed rpm : 475 Tolerance 1/min : +- 30

F04

```
Rated speed rpm
                       100
CRT mm min.
                  : > 19.50
TORQUE CONTROL
                       1050
Rated speed rpm
                       12.25
rack travel mm
Tolerance mm
                       0.05
ANEROID/ALTITUDE
COMPENSATOR TEST
SETTING
Rated speed rpm
                       500
Pressure hPa
                      1500
rack travel mm
                       12.25
                  : + - 0.05
Tolerance mm
MEASUREMENT
Pressure hPa
                       500
Rated speed rpm
                       10.00
rack travel mm
                   : +- 0.20
Tolerance mm
Rated speed rpm
                       500
                       320
Pressure hPa
                       10.50
rack travel mm
                  : +- 0.20
Tolerance mm
                       525
Pressure hPa
rack travel mm
                       11.75
Tolerance mm
                  : + 0.05
FUEL DELIVERY CHARACTERISTICS
Aneroid pressure
Rated speed rpm
                      1050
Del. quantity
cm3/1000 strokes :
                       199.0
Tolerance
cm3/1000 strokes : +-
Check tolerance
cm3/1000s.
                         6.0
Aneroid pressure
hPa
Rated speed rpm
                       500
Del. quantity cm3/1000 strokes :
```

144.0

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Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s.
                         4.0
BREAKAWAY
Rack travel in mm :
                      11.20
Rated speed rpm :
Tolerance 1/min
STARTING FUEL DELIVERY
Rated speed rpm
                       100
rack travel mm
                       10.00
Tolerance mm
                  : + 0.20
Del. quantity
cm3/1000 strokes :
                       160.0
Tolerance
cm3/1000 \text{ strokes} : +- 20.0
Check tolerance
cm3/1000s.
                  : +- 24.0
LOW IDLE
Rated speed rpm
                       350
                        4.60
rack travel mm
                       0.30
Tolerance mm
Del. quantity
cm3/1000 strokes :
                       21.0
Tolerance
cm3/1000 strokes : +-
                         3.0
Check tolerance
cm3/1000s.
                  : +-
                         6.0
Spreed
Tolerance
cm3/1000 strokes :
                         4.0
Check tolerance
cm3/1000s.
                         8.0
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BOSCH INJ. PUMP TEST SPECIFICATIONS	- Test lines : 1680750089
Note remarks	Outside diameter : 8.0
Refer to Service Info for test and adjustment instructions. See microcard(s) W400/	x inside diameter : 3.0 x Length mm : 600
Edition : 21.12.94 Test oil : ISO 4113	REMARKS
Combination No. : 0402735809	·
Injection pump Pump designation : PES5P120A720/3LS7310 EP type number : 0412725817 Governor Governer design. : RQ325/1000PA1106	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Governer no. : 0421801698	
#	BEGINNING OF DELIVERY
Cust. part No. : 3-7302	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Customer-spec. information Customer : MAN Motor : D2865LUH05 Power KW : 198.0	Prestroke mm : 5.15 Tolerance mm : + 0.05 test only : + 0.10
TEST BENCH REQUIREMENTS	Rack travel in mm : 12.80 Tolerance mm : +- 0.50
Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0	Firing order : 1-3-5-4-2
‡	Phasing : 0-72-144-216-288 Tolerance : +- 0.30
Overflow valve : 1417413025	Check tolerance °NW : +- 0.75
Inlet press. bar : 1.5 Tolerance bar : + 0.1	BEGINNING OF DELIVERY DIFFERENCE
Overflow quantity min. L/h : 115 Tolerance L/h : + 20.0	Time to cyl. no. : 5 S.o.d. blocking Barrel no. : 5
Test nozzle holde assembly : 1688901105	
Opening pressure bar : 208.5 Tolerance bar : + 1.5	BASIC SETTING Rated speed rpm : 550
Tolerance bar : ← 1.5	

Rack travel in mm :

11.50

Tolerance mm : + 0.05	Rated speed rpm : 399
Del. quantity cm3/1000 strokes : 252.0	guide sleeve travel mm : 4.44
Tolerance	Tolerance mm : + 0.10 Rated speed rpm : 530
Check tolerance	guide sleeve travel mm : 7.00
cm3/1000s. : + 4.0	Tolerance mm : + 0.10 Rated speed rpm : 1210
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1210 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 802
2nd speed rpm : 325	guide sleeve travel mm : 7.23 Tolerance mm : +- 0.10
Rack travel in mm: 4.80 + Tolerance mm: + 0.20	
Del. quantity +	GUIDE SLEEVE POSITION
cm3/1000 strokes : 35.0	Rated speed rpm : 700
cm3/1000 strokes : + 3.0 + Check tolerance	Rack travel in mm : 15.50
cm3/1000s. : +- 6.0 +- Spreed	Tolerance mm : +- 0.80
Tolerance + cm3/1000 strokes : 8.0 + Check tolerance +	FULL LOAD DELIVERY AT FULL LOAD STOP
check toterance cm3/1000s. : 12.0	Rated speed rpm : 550 Aneroid pressure
(B) SETTING OF INJECTION PUMP	hPa : 900 Del. quantity
WITH GOVERNOR	cm3/1000 strokes : 252.0 Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 325	cm3/1000s. : +- 4.0 Spreed
guide sleeve + travel mm : 2.70 +	Tolerance cm3/1000 strokes : 5.0
Tolerance mm : + 0.10	Check tolerance
Rated speed rpm : 1059	cm3/1000s. : 9.0
Rated speed rpm : 1059 guide sleeve travel mm : 7.62 Tolerance mm : + 0.10	
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10	cm3/1000s. : 9.0
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10 Rated speed rpm : 1000 guide sleeve	cm3/1000s. : 9.0 RATED SPEED control lever position degree : 103.0
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10 Rated speed rpm : 1000	cm3/1000s. : 9.0 RATED SPEED control lever position degree : 103.0 tolerance degree : 4.0
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10 Rated speed rpm : 1000 guide sleeve travel mm : 7.30 Tolerance mm : + 0.10 Rated speed rpm : 769	cm3/1000s. : 9.0 RATED SPEED control lever position degree : 103.0 tolerance degree : + 4.0 rack travel mm : 12.00 Rated speed rpm : 1053
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10 Rated speed rpm : 1000 guide sleeve travel mm : 7.30 Tolerance mm : + 0.10	cm3/1000s. : 9.0 RATED SPEED control lever position degree : 103.0 tolerance degree : + 4.0 rack travel mm : 12.00
guide sleeve travel mm : 7.62 Tolerance mm : + 0.10 Rated speed rpm : 1000 guide sleeve travel mm : 7.30 Tolerance mm : + 0.10 Rated speed rpm : 769 guide sleeve	cm3/1000s. : 9.0 RATED SPEED control lever position degree : 103.0 tolerance degree : + 4.0 rack travel mm : 12.00 Rated speed rpm : 1053

Rated speed rpm Tolerance 1/min		Ì	Pressure hPa rack travel mm Tolerance mm	: 250 : 9.20 : +- 0.05
rack travel mm Tolerance mm Rated speed rpm	: ← 0.50	+	Pressure hPa rack travel mm Tolerance mm	: 2000
LOW IDLE			Prescure hPa rack travel mm Tolerance mm	: 1150 : 11.80
control lever position degree tolerance degree	: 73.0 : 4.0	+	Pressure hPa rack travel mm Tolerance mm	: 600 : 10.95
Testing:		1		
Rated speed rpm rack travel mm Tolerance mm	: 4.80	+++++++++++++++++++++++++++++++++++++++	FUEL DELIVERY CHA	RACTERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 390 : +- 20	† † +	Aneroid pressure hPa Rated speed rpm Del. quantity	
Rated speed rpm	: 200	‡	cm3/1000 strokes Tolerance	
CRT mm min.	: > 6.50	‡	cm3/1000 strokes Check tolerance cm3/1000s.	: +- 3.0 : +- 6.0
TORQUE CONTROL		+	Aneroid pressure	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 11.50 : ← 0.05	† †	hPa Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm		Ŧ	Tolerance cm3/1000 strokes	
rack travel mm Tolerance mm	: 13.00	-	Check tolerance cm3/1000s.	: +- 5.0
Rated speed rpm	: 750 : 13.00	‡	Aneroid pressure	
rack travel mm Tolerance mm	: +- 0.10	Ŧ	Rated speed rpm Del. quantity	: 500
ANEROID/ALTITUDE	······································	<u> </u>	cm3/1000 strokes Tolerance	: 150.0
COMPENSATOR TEST		1	cm3/1000 strokes Check tolerance	: + 1.0
SETTING		+	cm3/1000S.	: +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 11.50 : + 0.05	‡ ‡ ‡	BREAKAWAY Rack travel in mm	
MEASUREMENT		+	Rated speed rpm Tolerance 1/min	: 1053 : +- 8
Rated speed rpm	: 500	‡		

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 8.90 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 75.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

325 Rated speed rpm 4.80 rack travel mm 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

DOSCH THE DIME T	TEST SPECIFICATIONS	Test lines : 1680750089
	EST SPECIFICATIONS	
Note remarks	1	Outside diameter : 8.0
Refer to Service adjustment instru See microcard(s)	Info for test and ections. W400/	<pre>x inside diameter : 3.0 x length mm : 600</pre>
Edition Test oil	: 21.12.94 : ISO 4113	REMARKS
Combination No.	: 0402735815	
EP type number	: PES5P120A720/3LS7310 : -1 : 0412725820	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Governor Governer design. Governer no.	: RQ325/1000PA1106 : 0421801698	BEGINNING OF DELIVERY
Cust. part No.	: 51.11103-7350	Test pressure bar : 31.0 Tolerance bar : + 1.0
Customer-spec. in Customer Motor Power KW	: MAN + + + + + + + + + + + + + + + + + + +	Prestroke mm : 5.15 Tolerance mm : + 0.05 test only : + 0.10 Rack travel in mm : 12.80
TEST BENCH REQUIR	EMENTS	Tolerance mm : +- 0.50 Firing order : 1- 3- 5- 4- 2
Test oil inlet temp. °C Tolerance °C	‡	Phasing : 0-72-144-216-288 Tolerance : + 0.30 Check tolerance °NW : + 0.75
over real value	1	
Inlet press. bar Tolerance bar	 ÷ 1.5 ⋮ + 0.1 	BEGINNING OF DELIVERY DIFFERENCE
Overflow quantity min. l/h Tolerance l/h	: 115	Time to cyl. no. : 5 S.o.d. blocking Barrel no. : 5
Test nozzle holde assembly	: 1688901105	BASIC SETTING
Opening pressure bar	: 208.5	Rated speed rpm : 550
Tolerance bar	: + 1.5	Rack travel in mm : 11.50

Tolerance mm : + 0.	.05	Rated speed rpm : 399
Del. quantity cm3/1000 strokes : 252	2.0	guide sleeve travel mm : 4.24 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : +- 1	1.0	Rated speed rpm : 540
Check tolerance cm3/1000s. : +- 4	÷.0	guide sleeve travel mm : 7.00 Tolerance mm : +- 0.10
	5.0	Rated speed rpm : 1210 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9	2.0	CHIDE SI FENE DOCTTION
2nd speed rpm : 325	;	GUIDE SLEEVE POSITION Rated speed rpm : 700
Rack travel in mm: 4. Tolerance mm: +- 0. Del. quantity cm3/1000 strokes: 35	20 🗼	Rack travel in mm : 15.50 Tolerance mm : + 0.80
Tolerance cm3/1000 strokes : +- 3	3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000S. : +- 6 Spreed	o.o ‡	Rated speed rpm : 550 Aneroid pressure
	0	hPa : 900 Del. quantity
Check tolerance cm3/1000s. : 12	2.0	cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION POWITH GOVERNOR	UMP +	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL		cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm : 325	‡	cm3/1000s. : 9.0
guide sleeve travel mm : 2.4 Tolerance mm : ← 0.4		RATED SPEED
Rated speed rpm : 1059 guide sleeve travel mm : 7.3 Tolerance mm : + 0.3	34	control lever position degree : 103.0 tolerance degree : +- 4.0
Rated speed rpm : 1000 guide sleeve	+	rack travel mm : 12.00 Rated speed rpm : 1053 Tolerance 1/min : +- 8
Tolerance mm : 7.0		rack travel mm : 4.00 Rated speed rpm : 1130
Rated speed rpm : 777 guide sleeve	<u> </u>	Tolerance 1/min : + 15
travel mm : 7.0 Tolerance mm : + 0.1		rack travel mm : 0.50 Tolerance mm : + 0.50

Rated speed rpm	: 1250		rack travel mm Tolerance mm	: 13.00 : + 0.05
LOW IDLE		+ 1	Pressure hPa rack travel mm Tolerance mm	: 1150 : 11.80 : ← 0.10
control lever position degree tolerance degree		+ 1	Pressure hPa rack travel mm Tolerance mm	: 600 : 10.95 : + 0.15
Testing:		+		
Rated speed rpm rack travel mm Tolerance mm	: 4.80	+	FUEL DELIVERY CHAI	RACTERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 390	+ +	nPa Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm	: 200	Ŧ 1	Tolerance	
CRT mm min.	: > 6.50	+ (cm3/1000 strokes Check tolerance	
		_	cm3/1000s.	: + 6.0
TORQUE CONTROL		+ 1	Aneroid pressure	. 2000
Rated speed rpm rack travel mm Tolerance mm	: 550 : 11.50	† F	nPa Rated speed rpm Del. quantity	: 2000 : 750
		Į i	cm3/1000 strokes Folerance	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.00	+ 0	cm3/1000 strokes Check tolerance	
lolerance mm		† °	cm3/1000s.	: +- 5.0
Rated speed rpm rack travel mm Tolerance mm	: 13.00	+ h	Aneroid pressure NPa Rated speed rpm Del. quantity	: – : 500
ANEROID/ALTITUDE		— + c	cm3/1000 strokes	: 150.0
COMPENSATOR TEST		+ c	folerance cm3/1000 strokes Check tolerance	: + 1.0
SETTING			:m3/1000s.	: +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 11.50	+	BREAKAWAY	
Tolerance mm	: + 0.05		Rack travel in mm Rated speed rpm	
MEASUREMENT			olerance 1/min	
Rated speed rpm	: 500	+		
Pressure hPa rack travel mm Tolerance mm	: 250 : 9.20 : + 0.05	+	TARTING FUEL DELI	
Pressure hPa			lated speed rpm lack travel mm lolerance mm	: 100 : 8.90 : +- 0.20
	. 2000	1 ,	COTALICE IIII	

Del. quantity cm3/1000 strokes : 75.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

325 Rated speed rpm 4.80 rack travel mm 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000s. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter : 3.0 Note remarks x Length mm Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... REMARKS Edition : 02.12.94 Test oil : ISO 4113 Combination No. : 0402746883 Injection pump Pump designation : PES6P110A320RS7198 EP type number : 0412716802 (A) INJECTION PUMP SETTING VALUES Governor Set equal delivery quant. Governer design. : RQV275...1250PA942K per values ____ : 0421815234 Governer no. BEGINNING OF DELIVERY Cust. part No. : CCEP 5097A Test pressure bar : Tolerance bar : +-Customer-spec. information Customer : RVI Prestroke mm 4.58 : MIDR 06.02.26 L : + - 0.05Motor Tolerance mm Power KW : 132.5 test only : + - 0.10TEST BENCH REQUIREMENTS Rack travel in mm : 13.00 Tolerance mm : ← 0.50 Test oil inlet : 1-5-3-6-2-Firing order temp. °C Tolerance °C 2.0 : 1417413025 Overflow valve Phasing : 0-60-120-180-240 : -300 : + - 0.30Tolerance Inlet press. bar : Check Tolerance bar 0.1 tolerance °NW : +- 0.50 Test nozzle holde BEGINNING OF DELIVERY DIFFERENCE assembly : 0681343009 Opening pressure 173.5 bar Time to cyl. no. : 1 : + 1.5 Tolerance bar : 1409918004 Lube oil BASIC SETTING : 1250 Rated speed rpm Test lines : 1680750089

Outside diameter :

8.0

Rack travel in mm : 14.65 Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 3.5
Del. quantity cm3/1000 strokes : 158.0	Spreed Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : + 3.5	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 4.0	control lever position degree : 114.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 7.5	rack travel mm : -1.00 Rated speed rpm : 1320
2nd speed rpm : 275	Tolerance 1/min : +- 5
Rack travel in mm: -9.50 Tolerance mm: + 0.20 Del. quantity	rack travel mm : -10.65 Rated speed rpm : 1490 Tolerance 1/min : +- 15
cm3/1000 strokes : 19.5 Tolerance cm3/1000 strokes : + 2.5	rack travel mm : -14.15 Tolerance mm : +- 0.55
Check tolerance cm3/1000s. : + 5.0 Spreed	Rated speed rpm : 1600
Tolerance + cm3/1000 strokes : 4.5 + Check tolerance + cm3/1000 strokes : 4.5 + cm3/1000 strokes	FOM IDE
cm3/1000s. : 7.5	control lever position degree : 62.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
+	Rated speed rpm : 200
GUIDE SLEEVE POSITION	CRT mm max. : < -8.90
control lever position degree : -1	CONTINUOUS-ACTION CONTROL
Rated speed rpm : 1385	Rated speed rpm : 415
Rack travel in mm: 13.60 Tolerance mm: + 1.30	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1250
Rated speed rpm : 1250 Aneroid pressure	Rated speed rpm : 750 rack travel mm : -0.80 Tolerance mm : +- 0.10
hPa : 1000 + Del. quantity	
cm3/1000 strokes : 158.0	Rated speed rpm : 750 rack travel mm : -5.60

Tolerance mm Rated speed rpm	: 750	Del. quantity cm3/1000 strokes : 62.0 Tolerance
rack travel mm Tolerance mm	: -8.00	+ cm3/1000 strokes : $+$ 5.0
loterance mm	: + 0.10	+ Check tolerance + cm3/1000s. : +- 8.0
		Spreed
ANEROID/ALTITUDE		Tolerance
COMPENSATOR TEST		cm3/1000 strokes : 8.0
		Aneroid pressure
SETTING		hPa : -
	4050	Rated speed rpm : 750
Rated speed rpm Pressure hPa	: 1250	+ Del. quantity + cm3/1000 strokes : 39.0
riessule iira	. 1000	Tolerance
MEASUREMENT		$cm3/1000 strokes : \leftarrow 5.0$
Dunanuma hD		+ Check tolerance + cm3/1000s. : + 8.0
Pressure hPa Rated speed rpm	1250	+ cm3/1000s. : +- 8.0 + Spreed
rack travel mm Tolerance mm	1250 -3.40	Tolerance
Tolerance mm	: +- 0.20	- cm3/1000 strokes : 8.0
Rated speed rpm	. 1250	+ Aneroid pressure
hated speed tipm	. 1200	T Affection pressure : -
Pressure hPa	: 220	- Rated speed rpm : 500
rack travel mm Tolerance mm	: -2.60 : +- 0.20	Del. quantity
Toterance mm	; 0.20	cm3/1000 strokes : 68.0 Tolerance
Pressure hPa	: 360	cm3/1000 strokes : +- 1.0
rack travel mm	: -1.75	- Check tolerance
Tolerance mm	: 4- 0.05	Aneroid pressure hPa : - Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 39.0 Tolerance cm3/1000s. : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 strokes : - Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.5
START CUT-OUT		+ BREAKAWAY
Datad anded mm	. \ 150	+
Rated speed rpm Check	: / 150	T Rack travel in mm : −1.00
speed 1/min	: > 130	+ Rated speed rpm : 1320
Rated speed rpm	: < 200	Tolerance 1/min : +- 5
Check speed 1/min		†
speed i/min	. \ 220	
		STARTING FUEL DELIVERY
FUEL DELIVERY CHA	ARACTERISTICS	+ Rated speed rpm : 100
Aneroid pressure		+ Rated speed rpm : 100 + Del. quantity
hPa Rated speed rpm	: 1000	cm3/1000 strokes : 100.0
Rated speed rpm	: 750	+ Tolerance
Del. quantity cm3/1000 strokes	· 127 በ	+ cm3/1000 strokes : +- 15.0
Tolerance	. (27.0	Check tolerance - cm3/1000s. : +- 19.0
cm3/1000 strokes	: +- 2.0	+
Check tolerance cm3/1000s.		†
UII37 (UUU3.	: — 5.0	I
Aneroid pressure		LOW IDLE
hPa	; -	+
Rated speed rpm	: 750	+ Rated speed rpm : 275 + rack travel mm : -9.50
		T Tack travel likil : "7.30

Tolerance mm	: +-	0.20
Del. quantity cm3/1000 strokes	:	19.5
Tolerance cm3/1000 strokes	: +-	2.5
Check tolerance		
cm3/1000s. Spreed	: +-	5.0
Tolerance		
cm3/1000 strokes Check tolerance	:	4.5
cm3/1000s.	:	7.5

BOSCH INJ. PUMP TEST SPECIFICATIONS Test Lines : 1680750089 Note remarks Outside diameter : 8.0 Refer to Service Info for test and x inside diameter : 3.0 adjustment instructions. x length mm : 600 See microcard(s) W400/... Edition : 20.12.94 Test oil : ISO 4113 REMARKS Combination No. : 0402746949 Injection pump (A) INJECTION PUMP SETTING VALUES Pump designation : PES6P120A720RS7224 Set equal delivery quant. : -2 per values ____ EP type number : 0412726893 BEGINNING OF DELIVERY Governor : RQV275...1100PA975 Governer design. : -3K Test pressure bar : Governer no. : 0421815350 Tolerance bar : +- 1.0 Cust. part No. : Prestroke mm : + 0.05 Tolerance mm test only Customer-spec. information : IVECO-FRANCE Customer Rack travel in mm: 10.50 : 8460.41.406 Motor Tolerance mm : +- 1.50 Firing order : 1-5-3-6-2-TEST BENCH REQUIREMENTS Test oil inlet : 0-60-120-180-240 temp. °C Phasing Tolerance °C 2.0 : -300 Tolerance : +- 0.30 Check Overflow valve : 1417413025 tolerance "NW : **←** 0.75 Inlet press. bar : BEGINNING OF DELIVERY DIFFERENCE Tolerance bar : + 0.1 Overflow quantity min. L/h : 140 Time to cyl. no. : 1 Tolerance L/h BASIC SETTING Test nozzle holde : 1688901105 assembly Rated speed rpm : 1100 Opening pressure Rack travel in mm: 12.75 Tolerance bar Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 218	.0 ‡	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : + 1	.0	
Check tolerance cm3/1000s. : + 4	.0	GUIDE SLEEVE POSITION
Spreed	+	control lever position degree : - 1
Tolerance cm3/1000 strokes : 5	.0	Rated speed rpm : 1140 Rack travel in mm : 16.50
Check tolerance cm3/1000s. : 9	.0 ‡	Tolerance mm : +- 1.30
2nd speed rpm : 275	Ī	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.5 Tolerance mm : + 0.5		Rated speed rpm : 1100 Aneroid pressure
Del. quantity cm3/1000 strokes : 26		hPa : 1200
Tolerance	+	Del. quantity cm3/1000 strokes : 218.0
cm3/1000 strokes : +- 3. Check tolerance	.0 ‡	Tolerance cm3/1000 strokes : +- 1.0
$cm3/1000s$. : \leftarrow 6.	.0	Check tolerance
Spreed Tolerance	İ	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes : 8.	.0 +	Tolerance
Check tolerance cm3/1000s. : 12.	.0 ‡	cm3/1000 strokes : 5.0 Check tolerance
	+	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PL	JMP I	
WITH GOVERNOR	1	RATED SPEED
GUIDE SLEEVE TRAVEL		control lever
Rated speed rpm : 275	+	position degree : 119.0 tolerance degree : + 4.0
guide sleeve travel mm : 1.9	20	rack travel mm : 11.70
Tolerance mm : + 0.1		Rated speed rpm : 1145
Rated speed rpm : 1145	<u>†</u>	Tolerance 1/min : +- 5
guide sleeve	+	rack travel mm : 4.00
Tolerance mm : + 0.1		Rated speed rpm : 1235 Tolerance 1/min : +- 15
Rated speed rpm : 750 guide sleeve	Ŧ	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 6.1 Tolerance mm : + 0.2		Rated speed rpm : 1350
Rated speed rpm : 430	†	LOW IDLE
guide sleeve travel mm : 3.6 Tolerance mm : +- 0.2		control lever
	Ţ	position degree : 75.0
Rated speed rpm : 1360	+	tolerance degree : +- 4.0

		+ Tolerance mm : + 0.20
Testing:		+
Rated speed rpm	: 275	Rated speed rpm : 900
rack travel mm Tolerance mm	: 5.50	Pressure hPa : 410
Tolerance mm	: - 0.10	rack travel mm : 8.80 Tolerance mm : +- 0.20
Rated speed rpm	: 100	+
		Pressure hPa : 750 rack travel mm : 11.35 Tolerance mm : +- 0.05
CRT mm min.	: > 7.00	rack travel mm : 11.35
		Toterance mm : +- U.US
CONTINUOUS-ACTIO	N CONTROL	START CUT-OUT Rated speed rpm : > 170 Check speed 1/min : > 150 Rated speed rpm : < 220 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 228.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 500 Del. quantity
Rated speed rpm	• 335	START CUT-OUT
macca speca (pin	. 332	Rated speed rpm : > 170
TORQUE CONTROL		speed 1/min : > 150 Rated speed rpm : < 220
Rated speed rom	1100	+ Rated speed rpm : < 220 + Check
Rated speed rpm rack travel mm Tolerance mm	: 12.75	Speed 1/min : < 240
Tolerance mm	: +- 0.05	+
		EUEL DEL TUEDY CHADACTEDICTICS
rack travel mm	: 12.75	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: +- 0.10	Aneroid pressure
		hPa : 1200
Rated speed rpm rack travel mm Tolerance mm	: 700	Rated speed rpm : 900
Tolerance mm	: 11.00 : + 0.10	+ Del. quantity + cm3/1000 strokes : 228.0
		Tolerance
Rated speed rpm	: 500	+ cm3/1000 strokes : +- 3.0
Rated speed rpm rack travel mm Tolerance mm	: 12.50	+ Check tolerance
loterance mm	: +- 0.10	cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm Tolerance mm	: 350	Aneroid pressure
rack travel mm	: 11.40	+ hPa : 1200
Tolerance mm	: +- 0.20	Rated speed rpm : 500
Rated speed rpm	. 500	Del. quantity cm3/1000 strokes : 243.0
rack travel mm	7.70	Tolerance
Tolerance mm		+ cm3/1000 strokes : +- 3.0
		Check tolerance
ANEROID/ALTITUDE		
COMPENSATOR TEST		+ Aneroid pressure
		+ hPa : -
SETTING		Rated speed rpm : 500 Del. quantity
SELLTING		cm3/1000 strokes : 120.0
Rated speed rpm	: 900	+ Tolerance
Pressure hPa		+ cm3/1000 strokes : +- 1.0
rack travel mm Tolerance mm		+ Check tolerance + cm3/1000S. : +- 4.0
forer drive limi	, י≕ עט.ט	+ cm3/1000s. : +- 4.0
MEASUREMENT		
Onogovine his		+ BREAKAWAY
Pressure hPa Rated speed rpm	900	I
rack travel mm	7.70	Rack travel in mm : 11.70
		T

Rated speed rpm : 1145 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

275 5.50 Rated speed rpm : rack travel mm : 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

BOSCH INJ. PUMP T	EST SPECIFICATIONS	x inside diameter : 2.0
Note remarks	#	· x Length mm : 600
Refer to Service adjustment instru See microcard(s)		REMARKS
Edition Test oil	: 15.12.94 : ISO 4113	(A) INJECTION PUMP SETTING VALUES
Combination No.	: 0402846054	Set equal delivery quant. per values
Injection pump Pump designation EP type number	: PE6P120A320RS8017 : 0412826018	BEGINNING OF DELIVERY
Governor Governer design.	: RQV3001100PA1017	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Governer no. Cust. part No.	‡	Prestroke mm : 4.15 Tolerance mm : + 0.05
case. pare no.		test only : \leftarrow 0.10
Customer-spec. in		Rack travel in mm : 10.50 Tolerance mm : +- 1.50
Customer Motor Power KW	: PENTA : TWD 1030 ME : 212.0	Firing order : 1-5-3-6-2- : 4
TEST BENCH REQUIR	EMENTS +	Di
Test oil inlet	† †	Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30
temp. °C Tolerance °C	: 40 : +- 2.0	Check tolerance °NW : +- 0.75
Overflow valve	: 2417413078	BEGINNING OF DELIVERY DIFFERENCE
Inlet press. bar Tolerance bar	: 2.5 : + 0.1	Time to cyl. no. : 1
Test nozzle holde assembly	: 1688901101	BASIC SETTING
Opening pressure	+	Rated speed rpm : 750
bar Tolerance bar	: 208.5 : + 1.5	Rack travel in mm : 11.05 Tolerance mm : +- 0.05
Test lines	: 1680750008	Del. quantity cm3/1000 strokes : 205.0
Outside diameter	: 6.0	CIII TOOU SCIONCS . LOJ.U

Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : - 1 Rated speed rpm : 1250
cm3/1000s. : + 4.0 Spreed Tolerance	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Check tolerance cm3/1000s. : 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 205.0 Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1137 guide sleeve travel mm : 8.19 Tolerance mm : + 0.25 Rated speed rpm : 816 guide sleeve travel mm : 5.27 Tolerance mm : + 0.25 Rated speed rpm : 385 guide sleeve travel mm : 385 guide sleeve travel mm : 1.98	Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0
Rated speed rpm : 1137 guide sleeve travel mm : 8.19 Tolerance mm : + 0.25	RATED SPEED
Rated speed rpm : 816 guide sleeve travel mm : 5.27 Tolerance mm : ← 0.25	control lever position degree : 58.0 tolerance degree : +- 4.0
Rated speed rpm : 385 guide sleeve travel mm : 1.98 Tolerance mm : + 0.25	control lever position degree : 114.0 tolerance degree : + 4.0 rack travel mm : 10.05
Rated speed rpm : 435 guide sleeve travel mm : 2.45	Rated speed rpm : 1125 Tolerance 1/min : +- 5 rack travel mm : 4.00
Tolerance mm : + 0.25 + Rated speed rpm : 530 +	Rated speed rpm : 1210 Tolerance 1/min : +- 15
guide sleeve travel mm : 3.11 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1320
Rated speed rpm : 1400 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50	LOW IDLE
GUIDE SLEEVE POSITION	position degree : 80.0 tolerance degree : +- 4.0
‡	control lever position degree : 15.0

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 4.30 Tolerance mm : + 0.30

Rated speed rpm : 100

CRT mm min. :> 6.00

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 330

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 11.05
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 7.80
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 780 rack travel mm : 2.90 Tolerance mm : + 0.10

Pressure hPa : 310 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 700

Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 132.0 Tolerance

cm3/1000 strokes : +-

Check tolerance cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 10.05
Rated speed rpm: 1125
Tolerance 1/min: +- 5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 16.12.94 Edition : ISO 4113 Test oil Combination No. : 0402946011 Injection pump Pump designation : PES6P120A320RS8028 EP type number : 0412926021 Governor Governer design. : RQV275...1250PA1125K : 0421815981 Governer no. Cust. part No. : CCEP 5140A 66-205 Customer-spec. information Customer : RVI : MIDR 06.02.26L51 Motor Power KW : 132.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 2417413078 Inlet press. bar : 2.5 Test nozzle holde assembly : 1688901101 Opening pressure 208.5 bar Tolerance bar : +- 1.5 Lube oil : 1409918004 Test Lines : 1680750008

```
x inside diameter :
                        2.0
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar
Prestroke mm
                       4.95
                  : +- 0.05
Tolerance mm
test only
                 : + 0.10
Rack travel in mm : 11.00
                 : +- 0.50
Tolerance mm
                 : 1-5-3-6-2-
Firing order
                  : 4
                 : 0-60-120-180-240
Phasing
                 : -300
                 : + - 0.30
Tolerance
Check
tolerance °NW
                 : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
betw. rack trav.
                      10.00
and maximum rack
                      21.00
travel
Difference ° CS
Tolerance
Time to cyl. no. :
BASIC SETTING
```

Outside diameter :

6.0

Rated speed rpm : 1250	+ Rated speed rpm : 390 guide sleeve
Rack travel in mm : 12.60 Tolerance mm : + 0.05	travel mm : 2.39 Tolerance mm : +- 0.20
Del. quantity	Rated speed rpm : 440 guide sleeve
cm3/1000 strokes : 169.0 Tolerance	travel mm : 3.01 Tolerance mm : + 0.20
cm3/1000 strokes : + 1.0	Rated speed rpm : 550
Check tolerance cm3/1000s. : +- 4.0	travel mm : 3.92 Tolerance mm : + 0.20
Spreed	Rated speed rpm : 1650
Toterance	guide sleeve
cm3/1000 strokes : 5.0	† travel mm : 13.50
	+ Tolerance mm : + 0.50
Check tolerance cm3/1000S. : 9.0	
	GUIDE SLEEVE POSITION
2nd speed rpm : 325	1
Rack travel in mm : -6.60	+ control lever
Tolerance mm : + 0.20	position degree : - 1
Del. quantity	Rated speed rpm : 1430
cm3/1000 strokes : 40.0	+
Tolerance	Rack travel in mm: 10.90
cm3/1000 strokes : +- 2.0 Check tolerance	Tolerance mm : +- 2.00
cm3/1000s. : +- 6.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1250
Check tolerance	Aneroid pressure
cm3/1000s. : 12.0	+ hPa : 1600
	+ Del. quantity
(B) SETTING OF INJECTION PUMP	- cm3/1000 strokes : 169.0
WITH GOVERNOR	+ Tolerance + cm3/1000 strokes : +- 1.0
	- Check tolerance
	- Check tolerance - cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	Spreed Tolerance
Rated speed rpm : 275	- cm3/1000 strokes : 5.0
guide sleeve	+ Check tolerance
travel mm : 1.00 Tolerance mm : + 0.15	- cm3/1000s. : 9.0
Rated speed rpm : 1355 guide sleeve	RATED SPEED
travel mm : 10.10	+
travel mm : 10.10 Tolerance mm : + 0.10	control lever
Rated speed rpm : 929	<pre>position degree : 296.0 tolerance degree : +- 4.0</pre>
guide sleeve	+
travel mm : 6.80 Tolerance mm : + 0.20	+ rack travel mm : -1.00
toterance iiii ; = 0.20	+ Rated speed rpm : 1335 + Tolerance 1/min : +- 5
	F Total and Trilling

rack travel mm Rated speed rpm Tolerance 1/min	: -8.60	rack travel mm : -4.20 Tolerance mm : +- 0.20
Tolerance 1/min	÷+- 15	Rated speed rpm : 1250
rack travel mm Tolerance mm Rated speed rpm	: -12.10 +	Pressure hPa : 200 rack travel mm : -3.60 Tolerance mm : + 0.20
LOW IDLE	‡	Pressure hPa : 360 rack travel mm : -2.50 Tolerance mm : + 0.05
control lever position degree tolerance degree		START CUT-OUT
Testing:	‡	Rated speed rpm : > 150 Check
Rated speed rpm	: 325	speed 1/min : > 130 Rated speed rpm : < 215
rack travel mm Tolerance mm	: + 0.10	Check speed 1/min : < 235
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm max.	: < -5.20	Aneroid pressure
CONTINUOUS-ACTION	CONTROL	hPa : 1600 Rated speed rpm : 650
COALTIMOOD2-MCITOA	I	nateu speeu (piii : 000
Rated speed rpm	: 360	Del. quantity cm3/1000 strokes : 181.0 Tolerance
TORQUE CONTROL		cm3/1000 strokes : +- 3.0
Rated speed rpm	. 1250	Check tolerance cm3/1000s. : +- 6.0
	+	Aneroid pressure
Rated speed rpm rack travel mm	: 650 +	hPa : _=
rack travel mm Tolerance mm	: -1.10 : + 0.10	Rated speed rpm : 500 Del. quantity
Rated speed rpm	: 350	cm3/1000 strokes : 118.0 Tolerance
rack travel mm Tolerance mm	: -1.70 : + 0.25	cm3/1000 strokes : + 1.0 Check tolerance
		cm3/1000S. : + 4.0
ANEROID/ALTITUDE COMPENSATOR TEST	+	BREAKAWAY
SETTING	+	Rack travel in mm : -1.00
Rated speed rpm Pressure hPa Tolerance mm	: 1250 : 1600 : + 0.10	Rated speed rpm : 1335 Tolerance 1/min : + 5
MEASUREMENT	Ī	STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm	: 500	Del. quantity cm3/1000 strokes : 122.0

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : -6.60
Tolerance mm : - 0.20
Del. quantity
cm3/1000 strokes : 40.0
Tolerance
cm3/1000 strokes : - 2.0
Check tolerance
cm3/1000s. : - 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.12.94 : ISO 4113

Combination No. : 0402946013

Injection pump

Pump designation : PES6P120A320RS8028

EP type number

: 0412926021

Governor

Governer design. : RQV275...1250PA1189K

Governer no.

: 0421815974

Cust. part No. : CCEP 5146 66-220

Customer-spec. information

Customer

: RVI

Motor

: MIDR 06.02.26Y41

Power KW

: 184.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 2417413078

Inlet press. bar :

2.5

Test nozzle holde

assembly

: 1688901105

Opening pressure

208.5

Tolerance bar

: **←** 1.5

Lube oil

: 1409918004

Test lines

: 1680750089

Outside diameter :

8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar

4.95 Prestroke mm Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 11.00 : +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.30 Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm :

1250

Rack travel in mm : 14.40

Tolerance mm

: **←** 0.05

Del. quantity cm3/1000 strokes : 277.0	guide sleeve travel mm : 3.16 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 550
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 3.97 Tolerance mm : +- 0.25
Spreed Tolerance	Rated speed rpm : 1630
cm3/1000 strokes : 5.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : 9.0	CUIDE OF FEVE DOCUTION
2nd speed rpm : 275	GUIDE SLEEVE POSITION
Rack travel in mm: -7.90 Tolerance mm: + 0.20 Del. quantity	control lever position degree : - 1 Rated speed rpm : 1420
cm3/1000 strokes : 36.0 + Tolerance cm3/1000 strokes : + 2.0 +	Rack travel in mm : 13.50 Tolerance mm : +- 1.50
Check tolerance cm3/1000s. : + 6.0	
Spreed Tolerance cm3/1000 strokes : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250
Check tolerance cm3/1000s. : 12.0	Aneroid pressure hPa : 1600
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0</pre>
	Check tolerance cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 275	Spreed Tolerance
Rated speed rpm : 275 guide sleeve travel mm : 1.10	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Tolerance mm : + 0.25	
Rated speed rpm : 1332 guide sleeve	RATED SPEED
travel mm : 10.07 Tolerance mm : + 0.25	control lever position degree : 299.0
Rated speed rpm : 912 guide sleeve	position degree : 299.0 tolerance degree : +- 4.0
travel mm : 6.79 Tolerance mm : + 0.25	rack travel mm : -1.00 Rated speed rpm : 1320 Tolerance 1/min : +- 5
Rated speed rpm : 412 guide sleeve	rack travel mm : -10.40
travel mm : 2.53 Tolerance mm : + 0.25	Rated speed rpm : 1475 Tolerance 1/min : +- 15
Rated speed rpm : 462	rack travel mm : -13.90
cus	

GOS

Tolerance mm : +- 0.50 Rated speed rpm : 1600	rack travel mm : -3.80 Tolerance mm : +- 0.20
LOW IDLE	Pressure hPa : 560 rack travel mm : -2.70 Tolerance mm : + 0.05
control lever position degree : 254.0 tolerance degree : + 4.0	START CUT-OUT
Testing:	Rated speed rpm : > 130 Check
Rated speed rpm : 275 rack travel mm : -7.90 Tolerance mm : + 0.10	speed 1/min :> 110 Rated speed rpm : < 225 Check speed 1/min : < 245
Rated speed rpm : 200	FUEL DELTUEDY CHARACTERYOTY CO
CRT mm max. : < -7.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
CONTINUOUS-ACTION CONTROL	hPa : 1600 Rated speed rpm : 650 Del. quantity
Rated speed rpm : 380	cm3/1000 strokes : 287.0 Tolerance
TORQUE CONTROL	cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm : 1250	cm3/1000s. : +- 6.0
Rated speed rpm : 650 rack trayel mm : -1.10 rolerance mm : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 197.0
Rated speed rpm : 350 rack travel mm : -2.80 rolerance mm : + 0.25	Tolerance : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST	BREAKAWAY
SETTING Rated speed rpm : 1250 Pressure hPa : 1600 Tolerance mm : + 0.10	Rack travel in mm : -1.00 Rated speed rpm : 1320 Tolerance 1/min : +- 5
MEASUREMENT	STARTING FUEL DELIVERY
Pressure hPa : - Rated speed rpm : 500 rack travel mm : -4.50 Toterance mm : + 0.20	Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm : 1250	cm3/1000S. : +- 19.0
Pressure hPa : 410	

G03

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	:	+	275 -7.90 0.20
Del. quantity cm3/1000 strokes			74.0
	•		36.0
Tolerance			2.0
cm3/1000 strokes	•	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0
	-		

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter : 3.0 x length mm : Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... Edition : 21.12.94 Test oil : ISO 4113 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Combination No. : 0403244043 per values ___ Injection pump Pump designation : PES4MW100/720RS1519 BEGINNING OF DELIVERY : 0413204017 EP type number Test pressure bar : Tolerance bar : +-Governor : RQV300...1300MW132 Governer design. : -6 Prestroke mm : 0420083309 Governer no. : + - 0.05Tolerance mm test only : + 0.10: 0240744102 Cust. part No. Rack travel in mm : 21.00 Firing order : 1-3-4-2 Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 103.0 : 0-90-180-270 Phasing Tolerance : +- 0.50Check TEST BENCH REQUIREMENTS : + - 0.75tolerance °NW Test oil inlet temp. °C BASIC SETTING Tolerance °C Rated speed rpm : 1300 Overflow valve : 1419992198 13.90 Rack travel in mm : : +- 0.05Tolerance mm 1.5 Inlet press. bar : Del. quantity cm3/1000 strokes : 126.0 Test nozzle holde : 1688901101 assembly Tolerance cm3/1000 strokes 1.0 Opening pressure Check tolerance Tolerance bar cm3/1000s. : +--4.0 Spreed Test lines : 1680750089 Tolerance cm3/1000 strokes : 4.0

Outside diameter :

8.0

Check tolerance cm3/1000s.	: 7.5	- Tolerance mm : +- 0.50
Del. quantity cm3/1000 strokes Tolerance	,	- GUIDE SLEEVE POSITION
cm3/1000 strokes Check tolerance	: +- 2.0	- control lever
cm3/1000s. Spr ee d	: +- 4.5	- position degree : - 1 - Rated speed rpm : 1510
Tolerance cm3/1000 strokes	: +- 2.0 : +- 4.5 : 3.5 : 5.5	- Rack travel in mm : 16.50 - Tolerance mm : +- 1.30
Check tolerance cm3/1000S.	: 5.5	- FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF I	NJECTION PUMP	Rated speed rpm : 1300 - Aneroid pressure - hPa : 1200
GUIDE SLEEVE TRA	VEL	- Del. quantity - cm3/1000 strokes : 126.0
Rated speed rpm guide sleeve	: 300	- Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
travel mm Tolerance mm	: 0.91 : + 0.25	- cm3/1000s. : + 4.0 - Spreed
Rated speed rpm guide sleeve	: 1354	- Tolerance - cm3/1000 strokes : 4.0 - Check tolerance
travel mm Tolerance mm	: 7.77 : ← 0.25	- cm3/1000s. : 7.5
Rated speed rpm guide sleeve	: 1140	- RATED SPEED
travel mm Tolerance mm	: 5.88 : + 0.25	- control lever
Rated speed rpm guide sleeve	: 629	position degree : 114.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 3.15 : + 0.25	rack travel mm : 12.90 Rated speed rpm : 1345 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 679	Tolerance 1/min : +- 5 rack travel mm : 4.00
travel mm Tolerance mm	: 3.53 : + 0.25	Rated speed rpm : 1465 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 800	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm Tolerance mm	: 4.00 : +- 0.25	Rated speed rpm : 1550
Rated speed rpm guide sleeve	: 1596	LOW IDLE
travel mm Tolerance mm	: 12.00 : + 0.25	control lever
Rated speed rpm guide sleeve	: 1690	position degree : 72.0 tolerance degree : +- 4.0
travel mm	: 13.50	Testing:

G06

Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.90 : +- 0.10	Check speed 1/min : < 220
Rated speed rpm		FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 4.50	Aneroid pressure hPa : 1200 Rated speed rpm : 750
TORQUE CONTROL		Del. quantity cm3/1000 strokes : 124.0 Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 13.90	cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0
Rated speed rpm rack travel mm Tolerance mm		Spreed Tolerance cm3/1000 strokes : 6.0
		+ Check tolerance + cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm	: 000 : 13.90 : + 0.10	Aneroid pressure hPa : 1200 Rated speed rpm : 600
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 2.0
SETTING		Check tolerance cm3/1000s. : + 5.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.90 : + 0.05	Check tolerance cm3/1000s. : + 5.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 67.0 Tolerance cm3/1000 strokes : + 1.0
MEASUREMENT		+ Tolerance + cm3/1000 strokes : + 1.0
Pressure hPa Rated speed rpm Tolerance mm		Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm	: 500	BREAKAWAY
Pressure hPa rack travel mm Tolerance mm	: 600 : 2.00 : + 0.10	Rack travel in mm : 12.90 Rated speed rpm : 1345 Tolerance 1/min : + 5
Pressure hPa rack travel mm Tolerance mm	: 350 : 0.50 : + 0.10	Toterance min . +- 3
		- STARTING FUEL DELIVERY
START CUT-OUT		+ Rated speed rpm : 100 + Del. quantity
Rated speed rpm Check speed 1/min	: > 100 : > 80	+ cm3/1000 strokes : 150.0 + Tolerance + cm3/1000 strokes : +- 5.0
Rated speed rpm	: < 200	Check tolerance cm3/1000s. : + 8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

BOSCH INJ. FUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.12.94 Edition Test oil : ISO 4113

Combination No. : 0403246039

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0413206020

Governor

Governer design. : RQV300...1300MW145

: 0420083317 Governer no.

Cust. part No. : 0250745402

Customer-spec. information Customer : MB-NFZ

Motor : 0M366LA Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

208.5 Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar 1.0

Prestroke mm Tolerance mm : **←** 0.05

: + 0.10test only

Rack travel in mm : 21.00

: 1-5-3-6-2-: 4 Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50 Check

tolerance °NW : + - 0.75

BASIC SETTING

Rated speed rpm 1300

11.25 Rack travel in mm : Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s. 3.0

Spreed

Tolerance		+ Rated speed rpm : 1780
cm3/1000 strokes	: 3.5	- guide sleeve
		+ travel mm : 13.50
Check tolerance		<pre>† Tolerance mm : ← 0.50</pre>
cm3/1000S.	: 6.0	+
No. 1		CUITATE OF CELLE PROTECTION
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance	: 12.0	Rated speed rpm : 1500
cm3/1000 strokes	· + 2 n	T Raced speed rpill : 1500
Check tolerance	2.0	Rack travel in mm : 10.00
cm3/1000s.	: +- 4.5	+ Tolerance mm : + 2.00
Spreed		+
Tolerance		
cm3/1000 strokes		+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		+
cm3/1000s.	: 5.5	Rated speed rpm : 1300
		+ Aneroid pressure + hPa : 1000
(B) SETTING OF I	NIECTION DUMD	Del. quantity
WITH GOVERNOR	ADECITOR I OLD	- cm3/1000 strokes : 96.0
W1111 00 VE101011		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRA	VEL	+ Check tolerance
		+ cm3/1000s. : $+ 3.0$
Rated speed rpm		+ Spreed
guide sleeve		† Tolerance
travel mm	: 1.02	- cm3/1000 strokes : 3.5
Tolerance mm	: +- 0.25	+ Check tolerance + cm3/1000S. : 6.0
Rated speed rpm	: 1353	I (110) 1003.
guide sleeve	. 1333	
travel mm	: 6.70	+ RATED SPEED
Tolerance mm	: +- 0.25	+
		+
Rated speed rpm	: 1090	+ control lever
guide sleeve	. / 70	position degree : 100.0
travel mm Tolerance mm	: 4.70	+ tolerance degree : + 4.0
roter arice iiiii		1
	: ← 0.25	+
Rated speed rom		rack travel mm : 10.20
Rated speed rpm		rack travel mm : 10.20 Rated speed rpm : 1345
Rated speed rpm guide sleeve travel mm		rack travel mm : 10.20 Rated speed rpm : 1345
guide sleeve	: 490	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00
guide sleeve travel mm Tolerance mm	: 490 : 2.25 : +- 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460
guide sleeve travel mm Tolerance mm Rated speed rpm	: 490 : 2.25 : +- 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 490 : 2.25 : + 0.25 : 540	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 490 : 2.25 : ← 0.25 : 540 : 2.54	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 490 : 2.25 : + 0.25 : 540	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 490 : 2.25 : + 0.25 : 540 : 2.54 : + 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 490 : 2.25 : + 0.25 : 540 : 2.54 : + 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 490 : 2.25 : + 0.25 : 540 : 2.54 : + 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 490 : 2.25 : + 0.25 : 540 : 2.54 : + 0.25 : 690	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 490 : 2.25 : ← 0.25 : 540 : 2.54 : ← 0.25 : 690 : 2.97 : ← 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Guide sleeve travel mm Tolerance mm	: 490 : 2.25 : ← 0.25 : 540 : 2.54 : ← 0.25 : 690 : 2.97 : ← 0.25	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE control lever
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 490 : 2.25 : ← 0.25 : 540 : 2.54 : ← 0.25 : 690 : 2.97 : ← 0.25 : 1683	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE control lever position degree : 55.0
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 490 : 2.25 : ← 0.25 : 540 : 2.54 : ← 0.25 : 690 : 2.97 : ← 0.25 : 1683 : 12.00	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE control lever
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 490 : 2.25 : + 0.25 : 540 : 2.54 : + 0.25 : 690 : 2.97 : + 0.25 : 1683 : 12.00	rack travel mm : 10.20 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE control lever position degree : 55.0

Rated speed rpm : 300	+ Che	ck ed 1/min : < 240	
rack travel mm : 3.5 Tolerance mm : + 0.1	0 +		
Rated speed rpm : 200	L L	L DELIVERY CHARACTERISTICS	
CRT mm min. : > 4.2	O + hPa	roid pressure : 1000 ed speed rpm : 750	
TORQUE CONTROL	+ Del	. quantity /1000 strokes : 87.0	
Rated speed rpm : 1300 rack travel mm : 11.2	+ cm3	erance /1000 strokes : +- 1.5 ck tolerance	
Tolerance mm : + 0.0	5 + cm3 + Spr	/1000s. : +- 4.0	
Rated speed rpm : 750 rack travel mm : 11.2 Tolerance mm : +- 0.1	5 + cm3 O + Che	erance /1000 strokes : 5.5 ck tolerance	
Rated speed rpm : 600 rack travel mm : 11.2 Tolerance mm : + 0.1	+	/1000S. : 7.0 roid pressure : 1000	
	Rat.	ed speed rpm : 600 quantity	
ANEROID/ALTITUDE COMPENSATOR TEST	+ cm3 + Tol	/1000 strokes : 88.0 erance	
OF TAIO	+ cm3 + Che	/1000 strokes : +- 1.5	
SETTING	t cms.	/1000s. : +- 4.0	
Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 11.2 Tolerance mm : +- 0.1	+ hPa 5 + Rate	roid pressure : - ed speed rpm : 500 quantity	
MEASUREMENT	+ cm3. + Tole	1000 strokes : 57.0 erance	
Pressure hPa : -	(1000 strokes : + 1.0 ck tolerance	
Rated speed rpm : 500 Tolerance mm : +- 0.10		1000s. : +- 3.0	
Rated speed rpm : 500	BRE	KAWAY	
Pressure hPa : 350 rack travel mm : 1.1 Tolerance mm : + 0.1	Fraction Rack	travel in mm: 10.20 d speed rpm : 1345	
Pressure hPa : 250 rack travel mm : 0.49 Tolerance mm : +- 0.10	1000	rance 1/min : +- 5	
	STAF	TING FUEL DELIVERY	
START CUT-OUT	+ Del.	d speed rpm : 100 quantity	
Rated speed rpm : > 100 Check) + cm3/ + Tale	1000 strokes : 160.0 rance	
speed 1/min :> 80 Rated speed rpm : < 220	+ cm3/ + Chec	1000 strokes : +- 5.0 k tolerance 1000s. : +- 8.0	
	1 (11)		

LOW IDLE

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000S.	:	5.5

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter: x length mm : 600 Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... : 21.12.94 Edition Test oil : ISO 4113 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Combination No. : 0403486106 per values ____ Injection pump Pump designation : PES6MW100/321RS1232 BEGINNING OF DELIVERY EP type number : 0413406226 Test pressure bar : Governor Tolerance bar : + 1.0: RSV300...1150MW0A343 Governer design. : -2 : 0420085210 Governer no. Prestroke mm Tolerance mm : **←** 0.05 Cust. part No. : 3-7262 : +- 0.10 test only Rack travel in mm : 10.50 Tolerance mm : **←** 1.50 Customer-spec. information Firing order : 1-5-3-6-2-Customer : MAN : D0826LE 523 Motor Power KW : 154.0 TEST BENCH REQUIREMENTS Phasing : 0-60-120-180-240 : -300 : **←** 0.50 Tolerance Test oil inlet Check temp. °C tolerance °NW : + - 0.75Tolerance °C 2.0 BEGINNING OF DELIVERY DIFFERENCE Overflow valve : 1417413047 Inlet press. bar : Time to cyl. no. : S.o.d. blocking Barrel no. Test nozzle holde : 0681343009 assembly BASIC SETTING Opening pressure 173.5 bar Rated speed rpm 1125 Tolerance bar Rack travel in mm : 13.15 Test lines : 1680750008 Tolerance mm : +- 0.05

2.0

Outside diameter :

6.0

Del. quantity

cm3/1000 strokes :

163.0

Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5
Check tolerance : + 4.0	
Spreed Tolerance	RATED SPEED
cm3/1000 strokes : 4.0 Check tolerance	control lever position degree : 104.0 tolerance degree : +- 4.0
cm3/1000s. : 7.5	rack travel mm : 12.15
Del. quantity cm3/1000 strokes : 15.0 Tolerance	Rated speed rpm : 1180 Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1280 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE control lever position degree : 77.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0 Testing:
control lever position degree : -3 Rated speed rpm : 800	Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : +- 0.10
Rack travel in mm: 0.65 Tolerance mm: + 0.35	rack travel mm : 2.00
governor spring pre-tension	Rated speed rpm : 100 CRT mm min. : > 19.00
click setting x : 5.50	
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1125 Aneroid pressure hPa : 1200	Rated speed rpm : 1125 rack travel mm : 13.15 Tolerance mm : +- 0.05
Del. quantity cm3/1000 strokes : 163.0 Tolerance	Rated speed rpm : 925 rack travel mm : 13.50 Tolerance mm : + 0.10
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed	Rated speed rpm : 600 rack travel mm : 13.50 Tolerance mm : + 0.10
·	

AMEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 1200	† + + + + + + + +	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
rack travel mm Tolerance mm		‡	BREAKAWAY
MEASUREMENT		Ì	Rack travel in mm : 12.15
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 9.45 : + 0.05	Į Į	Rated speed rpm : 1180 Tolerance 1/min : +- 5
Rated speed rpm	: 500	Ī	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 750 : 12.35 : + 0.15	T + + +	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 145.0 Tolerance
Pressure hPa rack travel mm Tolerance mm	: 150 : 9.75 : +- 0.05	+++++++++++++++++++++++++++++++++++++++	cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
FUEL DELIVERY CHA	RACTERISTICS	— <u>†</u>	LOW IDLE
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 165.0 : ← 2.0 : ← 5.0 : 6.0 : 9.0 : 1200 : 600	╬╸╬╌╬╌╬╌╬ ╸╬ ╌╬╌╬╌╬╌╬╌╬╼╬╼╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬	Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 18.03.94 Test oil : ISO 4113 Combination No. : 0401846900 Injection pump Pump designation : PE6P120A320RS3240 EP type number : 0411826786 Governor Governer design. : RQV250...1025PA921 : -16 : 0421813799 Governer no. Cust. part No. : 478378-P02 Customer-spec. information Customer : VOLVO-TRUCK Motor : TD122FL Power KW : 298.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 2457413046 Inlet press. bar Tolerance bar Test nozzle holde : 1688901019 assembly Opening pressure 208.5 Tolerance bar 1.5 Test lines : 1680750075

8.0

Outside diameter

G16

```
x inside diameter :
                        3.0
x Length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar
Prestroke mm
Tolerance mm
test only
                 : + 0.10
Rack travel in mm :
Tolerance mm
                : +- 1.50
Firing order
                 : 1-5-3-6-2-
                 : 4
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.30
Check
                 : ← 0.75
tolerance °NW
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
                     700
Rated speed rpm
Rack travel in mm :
                     13.65
Tolerance mm
```

	•
Del. quantity cm3/1000 strokes : 252.0	control lever position degree : 120.0 tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : +- 1.0	+ rack travel mm : 12.65
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1070 Tolerance 1/min : +- 5
Spreed Tolerance cm3/1000 strokes : 5.0	rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 9.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 64.0 tolerance degree : + 4.0
control lever position degree : - 1 Rated speed rpm : 1100	control lever position degree : 9.0 tolerance degree : + 4.0
Rack travel in mm : 16.50 Tolerance mm : +~ 1.30	Testing: Rated speed rpm : 250 rack travel mm : 6.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
Rated speed rpm : 700	Rated speed rpm : 100
Aneroid pressure hPa : 1200	CRT mm min. : > 8.10
Del. quantity cm3/1000 strokes : 252.0	CONTINUOUS-ACTION CONTROL
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 315
Check tolerance cm3/1000S. : +- 4.0	+
Spreed Tolerance	ANEROID/ALTITUDE
cm3/1000 strokes : 5.0 Check tolerance	COMPENSATOR TEST
cm3/1000s. : 9.0	+ SETTING
RATED SPEED	Rated speed rpm : 500 Pressure hPa : 1200
control lever	rack travel mm : 13.65 Tolerance mm : + 0.05
position degree : 65.0 tolerance degree : + 4.0	MEASUREMENT
	Fressure hPa : -

Rated speed rpm : 500 9.70 rack travel mm : +- 0.10 Tolerance mm 500 Rated speed rpm Pressure hPa 780 3.30 rack travel mm : + 0.10 Tolerance mm Pressure hPa 0.25 rack travel mm Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 700 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : +-4.0 **BREAKAWAY** Rack travel in mm: 12.65 Rated speed rpm : 1070 Tolerance 1/min : +-STARTING FUEL DELIVERY 100 Rated speed rpm rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000\$. : +- 24.0

lote remarks	EST SPECIFICATIONS	- x inside diameter: 2.0 - x length mm : 600
Refer to Service adjustment instru See microcard(s)		REMARKS
Edition Test oil	: 04.01.95 : ISO 4113	
Combination No.	: 0402046855	- (A) INJECTION PUMP SETTING VALUES - Set equal delivery quant per values
injection pump Pump designation P type number	: PE6P110A320RS3329 : 0412016743	BEGINNING OF DELIVERY
overnor overner design. overner no.	: RQV3251300PA1119 : 0421814083	Test pressure bar : 31.0 Tolerance bar : + 1.0
ust. part No.	: 1284418/3	- Prestroke mm : 4.85 - Tolerance mm : +- 0.05
	1	- test only : +- 0.10
ustomer-spec. in ustomer otor		- Rack travel in mm : 20.50 - Tolerance mm : + 0.50
over KW	: 156.0	- Firing order : 1-5-3-6-
EST BENCH REQUIRE	EMENTS	•
est oil inlet	1	- Phasing : 0-60-120-180-24 - : -300
emp. °C olerance °C	÷ + 40 ÷ + 2.0	Tolerance : +- 0.30 Check tolerance °NW : +- 0.75
erflow valve	. 1/17/17025	coterance NW U.75
veritow valve	: 141741302	BEGINNING OF DELIVERY DIFFERENCE
alet press. bar blerance bar		Time to cyl. no. : 1
st nozzle holde sembly	: 1688901101	BASIC SETTING
ening pressure	. 1000701101	Rated speed rpm : 1000
r	: 208.5 : + 1.5	indica speed (Mill . 1000
lerance har	i I	Rack travel in mm: 11.85
est lines	: 1680750008	Tolerance mm : +- 0.05

Tolerance cm3/1000 strokes	: +- 1.0	+ Rated speed rpm : 530 + guide sleeve
Check tolerance cm3/1000S.	: + 4.0	travel mm : 2.93 Tolerance mm : +- 0.25
Spreed Tolerance cm3/1000 strokes	: 4.0	Rated speed rpm : 1640 guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000S.	: 7.5	CUIDE CLEDIE DOCTITON
2nd speed rpm	: 325	+ GUIDE SLEEVE POSITION
Rack travel in m Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: ← 0.10 : 26.0 : ← 2.5	control lever position degree : - 1 Rated speed rpm : 1450 Rack travel in mm : 10.80 Tolerance mm : +- 1.30
Spreed Tolerance	. +- 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance cm3/1000s.		Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity
(B) SETTING OF IN	NJECTION PUMP	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAV	VEL	+ cm3/1000S. : +- 4.0 + Spreed + Tolerance
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1.33	cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Rated speed rpm	: 1353	RATED SPEED
guide sleeve travel mm Tolerance mm		control lever position degree : 122.0
Rated speed rpm guide sleeve		tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: 4.92 : ← 0.25	rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve travel mm Tolerance mm		rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 455 : 2.52 : ← 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600

	+ Pressure hPa : 370 + rack travel mm : 10.75
LOW IDLE	rack travel mm : 10.75 Tolerance mm : + 0.05
control lever position degree : 83.0 tolerance degree : +- 4.0	Pressure hPa : 200 rack travel mm : 8.40 Tolerance mm : + 0.10
Testing:	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 325 rack travel mm : 4.50 Tolerance mm : + 0.10	Aneroid pressure hPa : 1000 Rated speed rpm : 700
Rated speed rpm : 225	Del. quantity cm3/1000 strokes : 145.0
CRT mm min. : > 6.00	Tolerance cm3/1000 strokes : + 2.0
CONTINUOUS-ACTION CONTROL	Check tolerance : +- 5.0
Rated speed rpm : 375	Aneroid pressure hPa : - Rated speed rpm : 600
TORQUE CONTROL	+ Rated speed rpm : 600 + Del. quantity - cm3/1000 strokes : 98.5
Rated speed rpm : 1000 rack travel mm : 11.85 Tolerance mm : + 0.05	+ Tolerance + cm3/1000 strokes : +- 1.0
	← Check tolerance ← cm3/1000S. : ← 3.5
Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.05	BREAKAWAY
Rated speed rpm : 1300 rack travel mm : 11.85 Tolerance mm : +- 0.05	Rack travel in mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5
ANEROID/ALTITUDE COMPENSATOR TEST	-
SETTING	
Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 11.85 Tolerance mm : + 0.05	LOW IDLE Rated speed rpm : 325 rack travel mm : 5.20 Tolerance mm : + 0.10 Del. quantity
MEASUREMENT -	cm3/1000 strokes : 26.0 Tolerance
Pressure hPa :	cm3/1000 strokes : +- 2.5 Check tolerance cm3/1000s. : +- 5.0
Tolerance mm : +- 0.20	Spreed Tolerance
Rated speed rpm : 600 -	cm3/1000 strokes : 4.5

Check tolerance cm3/1000s. : 7.5

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.01.95 Test oil : ISO 4113

Combination No. : 0402646654

Injection pump

Pump designation : PE6P12DA32ORS736OZ

EP type number : 0412626937

Governor

Governer design. : RQ275/1150PA1193

Governer no. : 0421801752

Cust. part No. : 1285911/2

Customer-spec. information

Customer : DAF

: GS 160 M Motor

Power KW : 160.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar 0.1 : +-

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Toterance bar : +- 1.5

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x Length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

5.15 Prestroke mm : + - 0.05Tolerance mm

test only : + 0.10

Rack travel in mm : 11.40 Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

: + - 0.50tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 1000

Rack travel in mm : 10.40

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 150.0

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Tolerance cm3/1000 strokes	: +- 1.0	Rated speed rpm : 1360 guide sleeve
Check tolerance cm3/1000s.	: + 4.0	travel mm : 11.50 Tolerance mm : + 0.10
Spreed Tolerance cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 9.0	control lever position degree : - 1 Rated speed rpm : 550
2nd speed rpm	: 275	+
Rack travel in m Tolerance mm Del. quantity		Rack travel in mm : 15.80 Tolerance mm : +- 0.60
cm3/1000 strokes Tolerance	: 15.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: + 3.0	Rated speed rpm : 1000 Aneroid pressure
cm3/1000s. Spreed	: +- 6.0	+ hPa : 1000 - Del. quantity
Tolerance cm3/1000 strokes	: 8.0	cm3/1000 strokes : 150.0
Check tolerance cm3/1000s.	: 12.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
(115) 10003.	. 12.0	+ cm3/1000s. : +- 4.0 + Spreed
(B) SETTING OF I	NJECTION PUMP	Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRA	VEL	- cm3/1000s. : 9.0
Rated speed rpm guide sleeve		RATED SPEED
travel mm Tolerance mm	: 1.92 : +- 0.10	control lever
Rated speed rpm	: 1206	+ position degree : 97.0 + tolerance degree : + 4.0
guide sleeve travel mm	: 6.49	track travel mm : 9.40
Tolerance mm	: + 0.10	Rated speed rpm : 1202 Tolerance 1/min : + 8
Rated speed rpm guide sleeve	: 1150	rack travel mm : 4.00
travel mm Tolerance mm	: 6.00 : ← 0.10	Rated speed rpm : 1265 Tolerance 1/min : +- 15
Rated speed rpm	: 351	rack travel mm : 0.70 Tolerance mm : + 0.70
guide sleeve travel mm	: 4.25	+ Tolerance mm : +- 0.70 + Rated speed rpm : 1450
Tolerance mm	: +- 0.10	
Rated speed rpm guide sleeve	: 440	LOW IDLE
travel mm Tolerance mm	: 6.00 : + 0.10	‡

control lever position degree tolerance degree	: 74.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.90 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 340
Rated speed rpm	: 175
CRT mm min.	: > 7.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 10.40 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 10.40 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 10.40 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 9.50 : +- 0.10
Rated speed rpm	: 600
Pressure hPa rack travel mm Tolerance mm	: 290 : 10.15 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 250 : 9.80 : + 0.10
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FUEL DELIVERY CHARACTERISTICS
Aneroid pressure
Rated speed rpm
                        600
Del. quantity cm3/1000 strokes :
                        131.5
Tolerance cm3/1000 strokes : +-
                          1.0
Check tolerance
cm3/1000S.
                          4.0
BREAKAWAY
Rack travel in mm :
                        9.40
Rated speed rpm : 1202
Tolerance 1/min : +-
LOW IDLE
                       275
Rated speed rpm
                        4.90
rack travel mm
                  : + 0.10
Tolerance mm
Del. quantity cm3/1000 strokes :
                        15.0
Tolerance
cm3/1000 strokes : +-
                         3.0
Check tolerance
cm3/1000S.
                         6.0
Spreed
Tolerance
cm3/1000 strokes :
                         8.0
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12.0

Check tolerance cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 03.01.95 Test oil : ISO 4113 Combination No. : 0402676818 Injection pump Pump designation : PE6P120A320RS7326 EP type number : 0412626915 Governor Governer design. : RSV275...1000P1A573 Governer no. : 0421833429 Cust, part No. : 1265070/3 Customer-spec. information Customer : DAF : WS 268 L AG Motor Power KW : 268.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar 1.5 Tolerance bar : +--0.1 Tolerance L/h : +- 10.0 Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar Tolerance bar Lube oil : 1409918004

Test lines : 1680750089 Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +-5.35 Prestroke mm Tolerance mm test only : +- 0.10 Rack travel in mm : 14.50 Tolerance mm : + 0.50 : 1-5-3-6-2-Firing order : 0-60-120-180-240 Phasing : -300 : +- 0.30 Tolerance Check : + - 0.75tolerance °NW BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 1 BASIC SETTING 850 Rated speed rpm :

Rack travel in mm: 14.95 Tolerance mm: + 0.05	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 235.0
Del. quantity cm3/1000 strokes : 235.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 5.0	cm3/1000S. : 9.0 RATED SPEED
Check tolerance cm3/1000S. : 9.0 2nd speed rpm : 275	control lever position degree : 107.0 tolerance degree : +- 4.0
Rack travel in mm: 6.20 Tolerance mm: + 0.10 Del. quantity	rack travel mm : 13.95 Rated speed rpm : 1032 Tolerance 1/min : +- 8
cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : + 15
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250
cm3/1000s. : 12.0	rack travel mm : 4.00 Rated speed rpm : 1110
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 72.0 tolerance degree : + 4.0
control lever position degree : -3	Setting point w/out bumper spring
Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 275 rack travel mm : 4.50
Tolerance mm : + 0.20	Testing:
governor spring pre-tension click setting x : 4.00	Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850	rack travel mm : 2.00 Rated speed rpm : 360 Tolerance 1/min : +- 30
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TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 14.95 Tolerance mm : + 0.05

Rated speed rpm : 1000 rack travel mm : 14.90 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 14.95 Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 600
rack travel mm : 12.40
Tolerance mm : + 0.10

Rated speed rpm : 600

Pressure hPa : 490 rack travel mm : 14.25 Tolerance mm : + 0.05

Pressure hPa : 280 rack travel mm : 12.90 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 159.0
Tolerance

cm3/1000 strokes : ← 1.0 Check tolerance

cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm: 13.95

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Rated speed rpm : 1032 Tolerance 1/min : +- 8

LOW IDLE

Rated speed rpm : 275
rack travel mm : 6.20
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 17.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance

cm3/1000s. : +- 6.0 Spreed Tolerance

cm3/1000 strokes : 8.0 Check tolerance

cm3/1000s. : 12.0

Note remarks		+ x length mm : 600
Refer to Service adjustment instru See microcard(s)	Info for test and ctions. W400/	REMARKS
Edition Test oil	: 12.12.94 : ISO 4113	† †
Combination No.	: 0402036749	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Injection pump Pump designation EP type number	: PES6P110A120RS3286 : 0412016737	BEGINNING OF DELIVERY
Governor Governer design. Governer no.	: RQV3501150PA1014 : -2K : 0/21815296	Test pressure bar : 31.0 Tolerance bar : + 1.0
		Prestroke mm : 3.25 Tolerance mm : +- 0.05
Cust. part No.	: 3921971	test only : +- 0.10
Customer-spec. in		Rack travel in mm : 10.50 Tolerance mm : +- 1.50
Customer Motor Power KW		Firing order : 1-5-3-6-2
TEST BENCH REQUIR	EMENTS	‡
		+ Phasing : 0-60-120-180-240 + : -300
Test oil inlet temp. °C	: 40	+ Tolerance : + 0.30 + Check
Tolerance °C	: + 2.0	tolerance °NW : + 0.50
Overflow valve	: 1419992198	BEGINNING OF DELIVERY DIFFERENCE
Inlet press. bar	: 1.5	Time to out on 1
Test nozzle holde		Time to cyl. no. : 1 S.o.d. blocking Barrel no. : 1
assembly	: 1688901101	+ Tolerance : + 0.10 + Check
Opening pressure par Tolerance bar	: 208.5 : + 1.5	tolerance °NW : + 0.23
occidince bar		BASIC SETTING
Test lines	: 1680750008	Rated speed rpm : 1100
Outside diameter	: 6.0	Rack travel in mm : 15.45

Tolerance mm :	+- 0.05	rack travel mm Rated speed rpm	
Del. quantity cm3/1000 strokes :	154.0	Tolerance 1/min	: +- 5
Tolerance cm3/1000 strokes :	+ 1.0	rack travel mm Rated speed rpm Tolerance 1/min	: 1395
Check tolerance cm3/1000s. :	+- 3.0	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Spreed Tolerance cm3/1000 strokes :	4.0	LOW IDLE	
Check tolerance cm3/1000s. :	7.5	control lever position degree tolerance degree	
(B) SETTING OF INJECTION WITH GOVERNOR	:110N PUMP	control lever position degree tolerance degree	
GUIDE SLEEVE POSITIO	∔ и	Testing:	
control lever position degree :	-1	Rated speed rpm rack travel mm Tolerance mm	: 6.00 : + 0.10
FULL LOAD DELIVERY A	AT FULL LOAD STOP	Rated speed rpm	: 275
Rated speed rpm :	+	CRT mm min.	: > 7.30
Aneroid pressure hPa :	1200	CONTINUOUS-ACTION	CONTROL
Del. quantity cm3/1000 strokes : Tolerance	154.0	Rated speed rpm	: 350
cm3/1000 strokes : Check tolerance	+ 1.0 + 3.0	TORQUE CONTROL	····
Spreed Tolerance cm3/1000 strokes :	‡	Rated speed rpm rack travel mm Tolerance mm	: 15.45
Check tolerance cm3/1000S. :	7.5	Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.30 : ← 0.20
RATED SPEED	+		
control lever position degree :	112.0	Rated speed rpm rack travel mm Tolerance mm	: 15.30
tolerance degree :	+- '4.0	Rated speed rpm rack travel mm Tolerance mm	: 650 : 14.10
control lever position degree : tolerance degree :		Tolerance mm	: +- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 15.45 : ← 0.05	
MEASUREMENT		
Rated speed rpm	: 1100	
Pressure hPa rack travel mm Tolerance mm	: 600 : 13.80 : + 0.20	
Pressure hPa rack travel mm Tolerance mm	: 290 : 10.65 : + 0.05	
START CUT-OUT		_
Rated speed rpm Check		
speed 1/min Rated speed rpm Check	: > 80 : < 290	
speed 1/min	: < 300	
FUEL DELIVERY CHA	ARACTERISTICS	
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750	
cm3/1000 strokes Tolerance	: 156.0	
cm3/1000 strokes	: +- 2.0	
Check tolerance cm3/1000s. Spreed	: +- 4.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000S.	: 12.0	
Aneroid pressure hPa		
Rated speed rpm Del. quantity	500	
cm3/1900 strokes Tolerance	: 76.5	
cm3/1000 strokes	: +- 2.0	

Check tolerance cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm : 14.20
Rated speed rpm : 1220
Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 25.0

Note remarks		x length mm : 600
Refer to Service adjustment instru See microcard(s)		REMARKS
Edition Test oil	: 12.12.94	
Combination No.		(A) INJECTION PUMP SETTING VALUE Set equal delivery quant.
Injection pump	. 0402000190	per values
Pump designation P type number	: PES6P110A120RS3286 : 0412016737	BEGINNING OF DELIVERY
	: RQV3501150PA1014 : −3K	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Governer no.		Prestroke mm : 3.25 Tolerance mm : + 0.05
Cust. part No.	: 3921972	test only : +- 0.10
Customer-spec. in Customer		Rack travel in mm : 10.50 Tolerance mm : + 1.50
Motor Power KW	: 6CTA-A	Firing order : 1-5-3-0
TEST BENCH REQUIR	EMENTS	
		Phasing : 0-60-120-180 - : -300
Test oil inlet temp. °C	: 40	Tolerance : +- 0.30
Tolerance °C	: +- 2.0	tolerance °NW : + 0.50
Overflow valve	: 1419992198	BEGINNING OF DELIVERY DIFFERENCE
Inlet press. bar	: 1.5	
		Time to cyl. no. : 1 S.o.d. blocking
Test nozzle holde assembly	: 1688901101	Barrel no. : 1 Tolerance : + 0.10
Opening pressure	: 208.5	- Check - tolerance °NW : +- 0.23
olerance bar	: +- 1.5	- BASIC SETTING
est lines	: 1680750008	- Rated speed rpm : 1100
Outside diameter		
Juisiue diameter	. 0.0	Rack travel in mm : 14.65

Tolerance mm	: ← 0.05	rack travel mm : 13.40 Rated speed rpm : 1225
Del. quantity cm3/1000 strokes	: 144.5	Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes	: + 1.0	rack travel mm : 4.00 Rated speed rpm : 1380 Tolerance 1/min : +- 15
Check tolerance cm3/1000s.	: + 3.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500
Spreed Tolerance cm3/1000 strokes	: 4.0	LOW IDLE
Check tolerance		
cm3/1000S. (B) SETTING OF IN	: 7.5	control lever position degree : 14.0 tolerance degree : +- 4.0
WITH GOVERNOR	JECTION POPP	control lever position degree : 67.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSI	TION	Testing:
control lever position degree	:-1	Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : + 0.10
FULL LOAD DELTVER	Y AT FULL LOAD STOP	Rated speed rpm : 275
Rated speed rpm	+	CRT mm min. :> 7.30
Aneroid pressure hPa Del. quantity	: 1200	CONTINUOUS-ACTION CONTROL
cm3/1000 strokes Tolerance	: 144.5	Rated speed rpm : 435
cm3/1000 strokes Check tolerance	+	TORQUE CONTROL
cm3/1000S. Spreed Tolerance	: + 3.0	Rated speed rpm : 1100 rack travel mm : 14.65
cm3/1000 strokes Check tolerance	: 4.0	Tolerance mm : + 0.05
cm3/1000S.	: 7.5	Rated speed rpm : 750 rack travel mm : 13.60 Tolerance mm : + 0.10
RATED SPEED	‡	Rated speed rpm : 1150
control lever	100.0	rack travel mm : 14.50 Tolerance mm : +- 0.10
position degree tolerance degree	: + 4.0	Rated speed rpm : 650 rack travel mm : 13.40
control lever position degree tolerance degree		rack travel mm : 13.40 Tolerance mm : +- 0.20
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ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 14.65 : + 0.05
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 600 : 13.80 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 290 : 10.65 : +- 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 290
speed 1/min	: < 300
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 750
Del. quantity cm3/1000 strokes	: 141.0
Tolerance cm3/1000 strokes Check tolerance	: 2.0
cm3/1000S. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	
cm3/1000 strokes	: +- 2.0

Check tolerance : +- 4.0 BREAKAWAY Rack travel in mm : 13.40
Rated speed rpm : 1225
Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402036751

Injection pump

Pump designation : PES6P110A120RS3286

EP type number : 0412016737

Governor

Governer design. : RQV350...1200PA1014

: -4K

Governer no. : 0421815299

Cust. part No. : 3921973

Customer—spec. information Customer : CDC

Motor : 6CTA-A

Power KW : 156.5

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 : -300

Tolerance : +- 0.30 Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1
Tolerance : + 0.10
Check

tolerance °NW : + 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.55

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 142.5	Tolerance 1/min : +- 15 rack travel mm : 0.50
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : +- 0.50 Rated speed rpm : 1500
Check tolerance cm3/1000s. : + 3.0	LOW IDLE
Spreed Tolerance cm3/1000 strokes : 4.0	control lever position degree : 14.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 7.5	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 350 rack travel mm : 5.90 Tolerance mm : + 0.10
+	Rated speed rpm : 275
GUIDE SLEEVE POSITION	CRT mm min. : > 7.30
control lever position degree : -1	CONTINUOUS-ACTION CONTROL
<u> </u>	Rated speed rpm : 435
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONFROL
Rated speed rpm : 1100	
Aneroid pressure + 1200	Rated speed rpm : 1100
Del. quantity	rack travel mm : 14.55 Tolerance mm : + 0.05
cm3/1000 strokes : 142.5 +	
Tolerance	
COUNTY COLORS COUNTY TO THE COLORS OF THE CO	rack travel mm : 13.50
cm3/1000 strokes : + 1.0 - Check tolerance	Rated speed rpm : 750 rack travel mm : 13.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 3.0	loterance mm : + U.10
Check tolerance +	Rated speed rpm : 1150
Check tolerance cm3/1000s. : + 3.0 spreed Tolerance cm3/1000 strokes : 4.0	Rated speed rpm : 1150
Check tolerance cm3/1000s. : + 3.0 spreed Tolerance cm3/1000 strokes : 4.0 check tolerance	Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1150
Check tolerance cm3/1000s. : + 3.0 spreed Tolerance cm3/1000 strokes : 4.0 check tolerance	Rated speed rpm : + 0.10 Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 RATED SPEED control lever position degree : 58.0	Rated speed rpm : + 0.10 Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 RATED SPEED control lever position degree : 58.0 tolerance degree : + 4.0	Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650 rack travel mm : 13.30 Tolerance mm : + 0.20 ANEROID/ALTITUDE
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 RATED SPEED control lever position degree : 58.0 tolerance degree : + 4.0 rack travel mm : 13.30	Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650 rack travel mm : 13.30 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 RATED SPEED control lever position degree : 58.0 tolerance degree : + 4.0	Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650 rack travel mm : 13.30 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100 Pressure hPa : 1200
Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 RATED SPEED control lever position degree : 58.0 tolerance degree : + 4.0 rack travel mm : 13.30 Rated speed rpm : 1275	Rated speed rpm : 1150 rack travel mm : 14.40 Tolerance mm : + 0.10 Rated speed rpm : 650 rack travel mm : 13.30 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST

MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 475 : 13.20 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 215 : 10.45 : ← 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 290
Charle	
Check speed 1/min	: < 300
	·
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	RACTERISTICS : 1200
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	RACTERISTICS : 1200 : 750
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 750 : 139.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 750 : 139.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 750 : 139.0 : + 2.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 750 : 139.0 : + 2.0 : + 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1200 : 750 : 139.0 : + 2.0 : + 4.0 : 8.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aperoid pressure hPa Rated speed rpm	: 1200 : 750 : 139.0 : + 2.0 : + 4.0 : 8.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Apreoid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 750 : 139.0 : + 2.0 : + 4.0 : 8.0 : 12.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Appreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750 : 139.0 : + 2.0 : + 4.0 : 8.0 : 12.0

Rated speed rpm : 1275 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes :

155.0 Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s.

: +- 25.0

BREAKAWAY

Rack travel in mm: 13.30

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 13.01.95 Edition : ISO 4113 Test oil Combination No. : 0402618805 Injection pump Pump designation : PE8P130A900/5LS7841 EP type number : 0412638807 Governor Governer design. : Governer no. Cust. part No. : Customer-spec. information : IVECO-AIFO Customer : 8281 SRI 27.00 Motor TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 2417413076 Inlet press. bar Tolerance bar Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar Tolerance bar 1.5 : 1680750075 Test lines Outside diameter : 8.0

```
x inside diameter :
                        3.0
x Length mm : 1000
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +-
Prestroke mm
                       5.05
                 : ← 0.05
Tolerance mm
                 : +- 0.10
test only
Rack travel in mm : 12.00
Tolerance mm : + 0.50
                 : 1-8-4-3-6
:-5-7-2
Firing order
                 : 0-45-90-135-180
: -225-270-315
Phasing
Tolerance
                 : + - 0.50
Check
tolerance °NW
                 : + - 0.75
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
                       1
BASIC SETTING
                      550
Rated speed rpm
Rack travel in mm:
                     10.55
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                      215.0
```

Tolerance	
cm3/1000 strokes : +- 1.0	Rated speed rpm : 950 rack travel mm : 10.50
Check tolerance cm3/1000S. : +- 4.0	Tolerance mm : + 0.10
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
cm3/1000S. : 12.0	hPa : - Rated speed rpm : 950
2nd speed rpm : 300	Del. quantity cm3/1000 strokes : 217.0
Rack travel in mm: 4.20 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 25.0	Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Tolerance cm3/1000 strokes : + 3.0	+ cm3/1000s. : + 6.0
Check tolerance cm3/1000s. : +- 6.0	Ŧ
Spreed Tolerance	STARTING FUEL DELIVERY
cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 100 rack travel mm : 21.00
cm3/1000s. : 9.0	Tolerance mm : +- 0.50 Del. quantity
(B) SETTING OF INJECTION PUMP	+ cm3/1000 strokes : 165.0 + Tolerance
WITH GOVERNOR	cm3/1000 strokes : +- 15.0 Check tolerance - cm3/1000s. : +- 19.0
FULL LOAD DELIVERY AT FULL LOAD STOP	_
Rated speed rpm : 550 Aneroid pressure	LOW IDLE
hPa : — Del. quantity cm3/1000 strokes : 215.0 Tolerance	Rated speed rpm : 300 rack travel mm : 4.20 Tolerance mm : + 0.20
cm3/1000 strokes : + 1.0 Check tolerance	Del. quantity cm3/1000 strokes : 25.0
cm3/1000s. : +- 4.0 Spreed	Tolerance cm3/1000 strokes : + 3.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance	- Check tolerance - cm3/1000s. : +- 6.0 - Spreed
cm3/1000s. : 12.0	Tolerance cm3/1000 strokes : 5.0
	Check tolerance cm3/1000s. : 9.0
TORQUE CONTROL	— <u>†</u>

Rated speed rpm : rack travel mm :

550 10.55

4	
BOSCH INJ. PUMP TEST SPECIFICATIONS	x inside diameter : 3.0 x length mm : 600
Note remarks	A CONGRETATION . GGD
Refer to Service Info for test and adjustment instructions. See microcard(s) W400/	REMARKS
Edition : 12.01.95 Test oil : ISO 4113	(A) THERETTON DUMP CETTING VALUES
Combination No. : 0402646658	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Injection pump Pump designation : PE6P130A720RS7371 EP type number : 0412636837	BEGINNING OF DELIVERY
Governor Governer design. : RQV250900PA1215 Governer no. : D421814139	Test pressure bar : 31.0 Tolerance bar : + 1.0
Cust. part No. : 3825482 +	Prestroke mm : 4.35 Tolerance mm : ÷ 0.05
1	test only : \leftarrow 0.10
Customer-spec. information	Rack travel in mm : 7.80 Tolerance mm : +- 0.50
Customer : PENTA : TAMD 163 A : Power KW : 405.0 : TAMD 163 A : TAMD 1	Firing order : 1-5-3-6-2-
TEST BENCH REQUIREMENTS	
Test oil inlet temp. °C : 40 Tolerance °C : + 2.0	Phasing : 0-60-120-180-240 : -300 Tolerance : + 0.30 Check tolerance °NW : + 0.50
Overflow valve : 1457413010 +	BEGINNING OF DELIVERY DIFFERENCE
Inlet press. bar : 1.5 Tolerance bar : + 0.1	Time to cyl. no. : 1
Test nozzle holde assembly : 4688901105	BASIC SETTING
Opening pressure	Rated speed rpm : 900
bar : 208.5 Tolerance bar : + 1.5	Rack travel in mm : 13.20 Tolerance mm : +- 0.05
Test lines : 1680750089	Del. quantity cm3/1000 strokes : 379.0
Outside diameter : 8.0	
H12	

Tolerance cm3/1000 strokes	: 	Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: +- 5.0	GUIDE SLEEVE POSITION
Spreed Tolerance cm3/1000 strokes	: 7.0	control lever position degree : - 1 Rated speed rpm : 1030
Check tolerance cm3/1000s.	: 11.0	Rack travel in mm : 11.00 Tolerance mm : +- 2.00
Del. quantity cm3/1000 strokes Tolerance	: 22.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes		- Rated speed rpm : 900 - Aneroid pressure
cm3/1000s. Spreed	: ← 6.0	hPa : 1500 - Del. quantity
Tolerance cm3/1000 strokes	: 7.0	- cm3/1000 strokes : 379.0 - Tolerance
Check tolerance cm3/1000s.	: 11.0	- cm3/1000 strokes : + 1.5 - Check tolerance
(D) SETTING OF THE	ECTION DUMP	- cm3/1000s. : +- 5.0 - Spreed
(B) SETTING OF INJ WITH GOVERNOR	ECITON POMP	- Tolerance - cm3/1000 strokes : 7.0 - Check tolerance
GUIDE SLEEVE TRAVE		- cm3/1000s. : 11.0
guide sleeve	: 250	- RATED SPEED
travel mm Tolerance mm	: 1.12 : + 0.25	- control lever
Rated speed rpm guide sleeve	: 959	- position degree : 64.0 - tolerance degree : +- 4.0
travel mm	: 8.22	- - control lever
	: +- 0.25	- position degree : 119.0 - tolerance degree : +- 4.0
guide sleeve	: 315	- - rack travel mm : 12.20
travel mm	: 1.98 : ← 0.25	- Rated speed rpm : 945 - Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 365	rack travel mm : 4.00 Rated speed rpm : 1030
travel mm	: 2.47 : + 0.25	Tolerance 1/min : + 15
Rated speed rpm guide sleeve	: 650	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1120
travel mm	: 4.40 : +- 0.25	
- 1 - 1	: 1160	- LOW IDLE
guide sleeve travel mm	: 11.50	•

		+
control lever position degree tolerance degree	: 73.0 : + 4.0	FUEL DELIVERY CHARACTERISTICS
control lever position degree tolerance degree	: 17.0 : ← 4.0	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 406.0 Tolerance
Rated speed rpm rack travel mm Tolerance mm		cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Rated speed rpm	: 150	+ Aneroid pressure + hPa : -
CRT mm min.	: > 8.30	+ Rated speed rpm : 700 + Del. quantity + cm3/1000 strokes : 196.0
CONTINUOUS-ACTION	N CONTROL	Tolerance cm3/1000 strokes : +- 1.5
Rated speed rpm	: 350	+ Check tolerance + cm3/1000S. : + 5.0
TORQUE CONTROL		BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 13.20	Rack travel in mm : 12.20 Rated speed rpm : 945 Tolerance 1/min : +- 5
ANEROID/ALTITUDE COMPENSATOR TEST		† + +
SETTING		LOW IDLE
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.20 : +- 0.05	Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : + 3.0
MEASUREMENT		- Check tolerance - cm3/1000s. : + 6.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.80 : +- 0.10	Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance
Rated speed rpm	: 500	+ cm3/1000s. : 11.0
Pressure hPa rack travel mm Tolerance mm	: 900 : 6.10 : +- 0.15	† †
Pressure hPa rack travel mm Tolerance mm	: 170 : 0.25 : + 0.05	† †

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.01.95 Edition Test oil : ISO 4113

: 0402646872Y Combination No.

Injection pump

Pump designation : PE6P120A720RS7126

: -10Y

EP type number : 0412626930

Governor

: RQV200...1000PA725 Governer design.

: -6

Governer no. : 0421813755

Cust, part No.

Customer-spec. information

: SCANIA Customer Motor : DSC11 30

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

: 1688901019 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1680750015

Outside diameter : 6.0 x inside diameter : 3.0 x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 5.05 Tolerance mm

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

700 Rated speed rpm

Rack travel in mm : 14.45

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 246.0	Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 62.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	control lever
2nd speed rpm : 225	position degree : 117.0 tolerance degree : +- 4.0
Rack travel in mm: 4.80 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 20.0	rack travel mm : 13.40 Rated speed rpm : 1045 Tolerance 1/min : +- 5
Tolerance : + 2.0 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 15
Spreed + Tolerance + cm3/1000 strokes : 3.0 +	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1300
Check tolerance cm3/1000S. : 6.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 65.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 8.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1170	Testing:
Rack travel in mm: 9.00 Tolerance mm: + 3.00	Rated speed rpm : 225 rack travel mm : 4.80 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 700	CRT mm min. :> 6.30
Aneroid pressure hPa : - Del. quantity	CONTINUOUS-ACTION CONTROL
cm3/1000 strokes : 246.0 +	Rated speed rpm : 275
cm3/1000 strokes : + 1.0	TORQUE CONTROL
· ·	

Rated speed rpm rack travel mm Tolerance mm	: 1000 : 14.45 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 14.45 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.50 : +- 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 320 : 11.30 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 470 : 12.20 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 235.0 : + 4.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 144.0 : + 2.0 : + 4.0
BREAKAWAY	

Rack travel in mm : 13.40
Rated speed rpm : 1045
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.50
Tolerance mm : +- 0.20
Del. quantity
cm3/1000 strokes : 140.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 225 • 4.80 rack travel mm : Tolerance mm : + - 0.30Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.12.94 Test oil : ISO 4113

Combination No. : 0402676822

Injection pump

Pump designation: PE6P120A320RS7365

EP type number : 0412626940

Governor

Governer design. : RSV300...850P4A594

Governer no. : 0421833460

Cust. part No. : 11031890 P02 950103

Customer-spec. information

: VME Customer

: TD 122 KKE Motor

Power KW : 220.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2417413078

Inlet press. bar : Tolerance bar : +-0.1

Test nozzle holde

: 1688901103 assembly

Opening pressure

bar 208.5 Tolerance bar 1.5

: 1680750008 Test lines

Outside diameter : 6.0 x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm : +- 0.05

: ÷ 0.10 test only

Rack travel in mm : 10.00 : +- 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: ← 0.30 Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700	Del. quantity cm3/1000 strokes : 254.0
Rack travel in mm: 9.40 Tolerance mm: + 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Del. quantity cm3/1000 strokes : 254.0	cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. : 10.0
Check tolerance cm3/1000S. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 56.0 tolerance degree : +- 4.0
Check tolerance cm3/1000S. : 10.0	control lever position degree : 106.0
Del. quantity cm3/1000 strokes : 45.0 Tolerance	tolerance degree : +- 4.0 rack travel mm : 8.40
cm3/1000 strokes : +- 3.0 +- Check tolerance +-	Rated speed rpm : 870 Tolerance 1/min : +- 5
cm3/1000s. : + 6.0 + Spreed + Tolerance	rack travel mm : 4.00 Rated speed rpm : 930
cm3/1000 strokes : 7.0 + Check tolerance +	Tolerance 1/min : +- 15
cm3/1000s. : 11.0	rack travel mm : 0.80 Tolerance mm : +- 0.50 Rated speed rpm : 1070
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
+	talana da da da da da da da da da da da da da
GUIDE SLEEVE POSITION	tolerance degree : + 4.0 tolerance degree : + 4.0
+	Setting point w/out bumper spring
control lever position degree : -3 Rated speed rpm : 800	Rated speed rpm : 330
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Testing:
governor spring	Rated speed rpm : 330 Tolerance mm : +- 0.20
pre-tension click setting x : 6.00	rack travel mm : 2.00 Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 700 rack travel mm : 8.80
hPa : 1500 +	Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1500 9.40 rack travel mm Tolerance mm 0.05 **MEASUREMENT** Pressure hPa 500 Rated speed rpm rack travel mm 7.10 Tolerance mm : + 0.10500 Rated speed rpm 600 Pressure hPa 2.00 rack travel mm 0.20 Tolerance mm Pressure hPa 260 0.25 rack travel mm : + - 0.05Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure Rated speed rpm 700 Del. quantity cm3/1000 strokes 251.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 9.0 Check tolerance cm3/1000s. 13.0 Aneroid pressure Rated speed rpm 700 Del. quantity cm3/1000 strokes 196.0 Tolerance cm3/1000 strokes 1.0 : +-Check tolerance

4.0

BREAKAWAY

Rack travel in mm: 8.40
Rated speed rpm: 870
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000S. : + 19.0

LOW IDLE

Del. quantity cm3/1000 strokes 45.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000S. 6.0 Spreed Tolerance cm3/1000 strokes 7.0 Check tolerance cm3/1000s. 11.0

cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.01.95 : TSO 4113 Test oil

Combination No. : 0402735811

Injection pump

Pump designation : PES5P120A720/3LS7348

EP type number : 0412725818

Governor

Governer design. : RQ325/1000PA1106-2

: 0421801750 Governer no.

Cust. part No. : 3-7392

Customer-spec. information

Customer : MAN

: D2865LUH06 Motor

Power KW : 191.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar Tolerance bar : + 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

har 208.5 : +- 1.5 Tolarance bar

Lube oil : 1409918004

: 1680750089 Test lines

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm Tolerance mm : + - 0.05

test only : + - 0.10

Rack travel in mm: 12.80 Tolerance mm : +- 0.50

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

Tolerance : + - 0.30

Check

 $: \leftarrow 0.75$ tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

S.o.d. blocking

5

Barrel no.

BASIC SETTING

Rated speed rpm 750

Rack travel in mm:

12.10 Tolerance mm : + - 0.05

Del. quantity cm3/1000 strokes : 261.0	<pre>f guide sleeve + travel mm : 7.00 + Tolerance mm : + 0.10</pre>
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1210
Check tolerance cm3/1000s. : + 4.0	+ guide sleeve + travel mm : 11.50 + Tolerance mm : +- 0.50
Spreed Tolerance cm3/1000 strokes : 8.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 700
cm3/1000s. : 12.0	Rack travel in mm : 15.50 Tolerance mm : + 0.80
2nd speed rpm : 325	
Rack travel in mm: 4.90 Tolerance mm: + 0.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 43.0	Rated speed rpm : 750 Aneroid pressure
Tolerance cm3/1000 strokes : +- 3.0	hPa : 2000 Del. quantity
Check tolerance cm3/1000s. : +- 6.0	cm3/1000 strokes : 261.0
Spreed Tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 8.0 - Check tolerance	+ cm3/1000s. : $+$ 4.0
cm3/1000s. : 12.0	Spreed Tolerance cm3/1000 strokes : 8.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000S. : 12.0
	RATED SPEED
GUIDE SLEEVE TRAVEL -	-
Rated speed rpm : 325 - guide sleeve - travel mm : 2.50	control lever position degree : 100.0 tolerance degree : +- 4.0
Tolerance mm : + 0.10 - Rated speed rpm : 1059 -	rack travel mm : 11.10 Rated speed rpm : 1053
guide sleeve - travel mm : 7.34 -	Tolerance 1/min : + 8
Tolerance mm : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1130
Rated speed rpm : 1000 - guide sleeve	Tolerance 1/min : +- 15
travel mm : 7.00 - Tolerance mm : + 0.10 -	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250
Rated speed rpm : 401 - guide sleeve	Nated Speed (MIII . 1250
travel mm : 4.29 Tolerance mm : + 0.10	LOW IDLE

Rated speed rpm : 530

		+ Tolerance mm : +- Q.10
control lever position degree tolerance degree	: 73.0 : +- 4.0	Pressure hPa : 500 rack travel mm : 10.40 Tolerance mm : + 0.15
Testing:		Total and the same of the same
Rated speed rpm rack travel mm Tolerance mm	: 4.90	FUEL DELIVERY CHARACTERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 390 : ← 20	Aneroid pressure hPa : 2000 Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 241.0
Rated speed rpm	: 200	+ Tolerance
CRT mm min.	: > 8.00	+ cm3/1000 strokes : + 3.0 + Check tolerance + cm3/1000s. : + 6.0
TORQUE CONTROL		- Spreed - Tolerance - cm3/1000 strokes : 8.0
Rated speed rpm rack travel mm Tolerance mm	: 12.10	Check tolerance cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.10	Aneroid pressure hPa : 750 Rated speed rpm : 550 Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 550 : 10.80 : ← 0.10	- cm3/1000 strokes : 235.0 - Tolerance - cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 5.0
ANEROID/ALTITUDE COMPENSATOR TEST		- + Aneroid pressure + hPa : - Rated speed rpm : 500
SETTING		Del. quantity cm3/1000 strokes : 159.0 Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 750	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
MEASUREMENT		BREAKAWAY
Rated speed rpm	: 500	Topole Amount in the Atlanta
Pressure hPa rack travel mm Tolerance mm	: 250 : 8.75 : + 0.05	+ Rack travel in mm : 11.10 + Rated speed rpm : 1053 + Tolerance 1/min : + 8
Pressure hPa rack travel mm Tolerance mm	: 2000 : 12.10 : +- 0.05	STARTING FUEL DELIVERY
Pressure hPa rack travel mm	: 1000 : 11.05	Rated speed rpm : 100 rack travel mm : 8.35 Tolerance mm : +- 0.20
H23		

Del. quantity cm3/1000 strokes : 80.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm rack travel mm 325 4.90 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 43.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000S. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402736803 Injection pump Pump designation : PES6P110A120RS7187 EP type number : 0412716801 Governor Governer design. : RQV350...1100PA924 : -3K Governer no. : 0421815228 Cust. part No. : Customer-spec. information Customer : CDC Motor : 6CTA TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 2417413047 Overflow quantity min. L/h Tolerance 1/h : +- 5.0 Test nozzle holde : 1688901101 assembly Opening pressure 208.5 Tolerance bar : +- 1.5

: 1680750008

6.0

```
x inside diameter :
                       2.0
x length mm :
                    600
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar : 31.0
Tolerance bar : +- 1.0
                : 4.40
Prestroke mm
                : + 0.05
Tolerance mm
test only
                : + 0.10
Rack travel in mm : 10.50
                : +- 1.50
Tolerance mm
Firing order
                : 1-5-3-6-2-
Phasing
                : 0-60-120-180-240
                : -300
Tolerance
                : + - 0.30
Check
tolerance °NW
                : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
                : + 0.10
Tolerance
Check
tolerance "NW
                : + 0.23
BASIC SETTING
Rated speed rpm
                    1100
Rack travel in mm :
                     10.45
Tolerance mm
                : +- 0.05
Del. quantity
cm3/1000 strokes :
                     138.0
```

Test lines

Outside diameter :

Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1215 Tolerance 1/min : +- 15
Check tolerance cm3/1000s. : +- 4.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350
Spreed Tolerance cm3/1000 strokes : 5.0	LOW IDLE
Check tolerance cm3/1000S. : 9.0	control lever position degree : 15.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : +- 0.10
control lever	CONTINUOUS-ACTION CONTROL
position degree : -1 Rated speed rpm : 1230	Rated speed rpm : 400
Rack travel in mm : 9.00 + Tolerance mm : + 3.00 +	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1100 rack travel mm : 10.45 Tolerance mm : + 0.05
Rated speed rpm : 1100 Aneroid pressure hPa : 900	Rated speed rpm : 900 rack travel mm : 10.20 Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes : 138.0	Tolerance mm : + 0.10 Rated speed rpm : 650
cm3/1000 strokes : + 1.0 + Check tolerance cm3/1000s. : + 4.0 + 4.0	rack travel mm : 4.95 Tolerance mm : + 4.95
Spreed Tolerance cm3/1000 strokes : 5.0	ANEROID/ALTITUDE COMPENSATOR TEST
Check tolerance cm3/1000S. : 9.0	SETTING
RATED SPEED	Rated speed rpm : 1100 Pressure hPa : 900 rack travel mm : 10.45
control lever position degree : 60.0 tolerance degree : + 4.0	Tolerance mm : +- 0.05 MEASUREMENT
rack travel mm : 9.40 Rated speed rpm : 1145	Pressure hPa : - Rated speed rpm : 1100
Tolerance 1/min : + 5 rack travel mm : 4.00	rack travel mm : 6.90 Tolerance mm : + 0.20

H26

Rated speed rpm : 1100

Pressure hPa : 330 rack travel mm : 8.60 Tolerance mm : +- 0.20

Pressure hPa : 200 rack travel mm : 7.45 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 88.0

Tolerance cm3/1000 strokes : +- 2.0

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 9.40 Rated speed rpm : 1145 Tolerance 1/min : +- 5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402736805 Injection pump Pump designation : PES6P120A120RS7206 EP type number : 0412726835 Governor Governer design. : RQV350...1100PA924 : -5K Governer no. : 0421815250 Cust. part No. : 3281182 Customer-spec. information Customer : CUMMINS Motor : 6CTAA : 202.0 Power KW TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413047 Overflow quantity min. l/h : 165 Tolerance l/h : + 5.0 Test nozzle holde : 1688901101 assembly Opening pressure 208.5 par Tolerance bar Test lines : 1680750008 Outside diameter : 6.0

H28

```
x inside diameter :
                       2.0
x length mm :
                    600
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar: 31.0
Tolerance bar : +- 1.0
Prestroke mm
Tolerance mm
               : +- 0.05
               : ← 0.10
test only
Rack travel in mm: 10.50
Tolerance mm : \leftarrow 1.50
Firing order
                : 1-5-3-6-2-
                : 4
               : 0-60-120-180-240
Phasing
                : -300
Tolerance
               : +- 0.30
Check
tolerance °NW
                : + 0.50
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
                : + 0.10
Tolerance
Check
tolerance °NW
                : + 0.23
BASIC SETTING
Rated speed rpm : 1100
Rack travel in mm : 12.15
Tolerance mm
               : +- 0.05
Del. quantity
cm3/1000 strokes : 159.0
```

Tolerance	rack travel mm : 4.00 Rated speed rpm : 1275
cm3/1000 strokes : + 1.0	Tolerance 1/min : + 15
Check tolerance cm3/1000S. : +- 4.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Spreed Tolerance	
cm3/1000 strokes : 5.0	LOW IDLE
Check tolerance cm3/1000s. : 9.0	control lever position degree : 75.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 5.30 Tolerance mm : +- 0.10
1	Rated speed rpm : 250
control lever	
position degree : -1 Rated speed rpm : 1420	CRT mm min. : > 6.80
Rack travel in mm: 9.00 Tolerance mm: +- 3.00	CONTINUOUS-ACTION CONTROL
	Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1100	TORQUE CONTROL
Rated speed rpm : 1100 - Aneroid pressure	TORQUE CONTROL
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity	TORQUE CONTROL
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05 Rated speed rpm : 600
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : + 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : + 0.10 ANEROID/ALTITUDE
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : + 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : + 0.10
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : + 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : + 0.10 ANEROID/ALTITUDE
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 115.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED RATED SPEED rack travel mm : 11.10	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1100
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 115.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.15 Tolerance mm : +- 0.05 Rated speed rpm : 600 rack travel mm : 11.20 Tolerance mm : +- 0.10 Rated speed rpm : 800 rack travel mm : 11.80 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 300 : 8.90 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.20 : + 0.10
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 270
speed 1/min	
FUEL DELIVERY CHA Aneroid pressure hPa	: 1200
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	ARACTERISTICS : 1200 : 600
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	ARACTERISTICS : 1200 : 600 : 177.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	ARACTERISTICS : 1200 : 600 : 177.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	ARACTERISTICS : 1200 : 600 : 177.0 : ← 3.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes	ARACTERISTICS : 1200 : 600 : 177.0 : ← 3.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1200 : 600 : 177.0 : + 3.0 : + 6.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 600 : 177.0 : + 3.0 : + 6.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1200 : 600 : 177.0 : + 3.0 : + 6.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 600 : 177.0 : + 3.0 : + 6.0 : 8.0 : 12.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Aneroid pressure hPa Rated speed rpm Del. quantity	1200 : 1200 : 600 : 177.0 : + 3.0 : + 6.0 : 8.0 : 12.0

Rack travel in mm : 11.10
Rated speed rpm : 1145
Tolerance 1/min : + 5

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STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 245.0
Tolerance
cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : +- 14.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736810

Injection pump

Pump designation : PES6P110A120RS7213

EP type number : 0412716804

Governor

Governer design. : RQV400...1250PA964

: -2K

Governer no. : 0421815254

Cust. part No. : 3921777

Customer—spec. information

Customer : CDC

Motor : 6BTA-A

Power KW : 141.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C : +- 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 120

Tolerance l/h: \leftarrow 5.0

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : +- 1.0

Prestroke mm : 4.40

Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

S.o.d. blocking

Barrel no. : 1

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.23

	† Tolerance + cm3/1000 strokes : + 1.0
BASIC SETTING	+ Check tolerance
ated speed rpm : 1250	+ cm3/1000s. : + 4.0 + Spreed
	+ Tolerance
ack travel in mm : 14.85	cm3/1000 strokes : 5.0 Check tolerance
olerance mm : + 0.05	cm3/1000s. : 9.0
el. quantity m3/1000 strokes : 161.0	RATED SPEED
	+
olerance m3/1000 strokes : +- 1.0	t control lever
	+ position degree : 63.0
heck tolerance m3/1000s. : +- 4.0	tolerance degree : +- 4.0
	control lever
preed olerance	position degree : 119.0 tolerance degree : + 4.0
m3/1000 strokes : 5.0	+
heck tolerance	rack travel mm : 13.80 Rated speed rpm : 1300
m3/1000s. : 9.0	Tolerance 1/min : + 5
el. quantity	t rack travel mm : 4.00
n3/1000 strokes : 36.0	rack travel mm : 4.00 Rated speed rpm : 1475
olerance m3/1000 strokes : +- 3.0	Tolerance 1/min : + 15
n3/1000 strokes : - 3.0 heck tolerance n3/1000s. : + 5.0	rack travel mm : 0.50
n3/1000s. : 4- 5.0	+ Tolerance mm : $+$ 0.50
oreed olerance	Rated speed rpm : 1600
m3/1000 strokes : 8.0	1 OU TOLE
heck tolerance m3/1000s. : 12.0	+ LOW IDLE
	+
B) SETTING OF INJECTION PUMP	control lever position degree : 71.0
TH GOVERNOR	tolerance degree : + 4.0
	+ control lever
(TATE OF POOTTEN	position degree : 15.0 tolerance degree : + 4.0
IDE SLEEVE POSITION	tolerance degree : +- 4.0
ated speed rpm : 1450	Testing:
ack travel in mm : 13.80	Rated speed rpm : 400
lerance mm : + 1.30	rack travel mm : 5.50 Tolerance mm : + 0.10
	+ Toterance min : + 0.10
ILL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 275
ated speed rpm : 1250	+ CRT mm min. : > 7.20
neroid pressure Pa : 1200	<u> </u>
el. quantity	CONTINUOUS-ACTION CONTROL
n3/1000 strokes : 161.0	Pated chard rnm · //27
	+ Rated speed rpm : 423

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		+ Tolerance
TORQUE CONTROL		- + cm3/1000 strokes : 8.0 - Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 14.85 : +- 0.05	cm3/1000s. : 12.0 Aneroid pressure hPa : -
Rated speed rom	. 200	Rated speed rpm : 500 Del. quantity
rack travel mm Tolerance mm	: 13.10 : + 0.10	+ cm3/1000 strokes : 97.5 + Tolerance
ANEROID/ALTITUDE		- cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 4.0
COMPENSATOR TEST		cm3/1000s. : +- 4.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa Pack travel mm Tolerance mm	: 1250 : 1200 : 14.85 : +- 0.05	Rack travel in mm : 13.80 Rated speed rpm : 1300 Tolerance 1/min : +- 5
MEASUREMENT		CTARTING SUFFI RELEVEDY
Rated speed rpm	: 1250	STARTING FUEL DELIVERY
ressure hPa ack travel mm olerance mm	: 13.40	Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.50 Del. quantity
ressure hPa ack travel mm olerance mm	: 365 : 10.25 : +- 0.05	cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
ART CUT-OUT	······································	Check tolerance cm3/1000s. : +- 25.0
ated speed rpm	: > 100	LOW IDLE
peed 1/min ated speed rpm neck	: > 80 : < 290	Del. quantity cm3/1000 strokes : 36.0
eed 1/min	: < 300	Tolerance cm3/1000 strokes : +- 3.0
EL DELIVERY CHA	ARACTERISTICS	- Check tolerance - cm3/1000s. : +- 5.0 - Spreed
eroid pressure	: 1200	Tolerance cm3/1000 strokes : 8.0
ted speed rpm L. quantity 3/1000 strokes		Check tolerance cm3/1000s. : 12.0
erance 3/1000 strokes		+
eck tolerance 3/1000s.	: +- 6.0	<u> </u>

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BOSCH INJ. PUMP T	TEST SPECIFICATIONS	Test lines : 1680750008
Note remarks	Ŧ	Outside diameter : 6.0
Refer to Service adjustment instru See microcard(s)	Info for test and triins.	x inside diameter : 2.0 x length mm : 600
Edition Test oil	: 12.12.94 : ISO 4113	REMARKS
Combination No.	: 0402736811	
Injection pump Pump designation EP type number	: PES6P110A120RS7213 : 0412716804	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Governor Governer design.	: RQV4001250PA964 : -3K	BEGINNING OF DELIVERY
Governer no.		Test pressure bar : 31.0 Tolerance bar : + 1.0
Cust. part No.	: 3921776	Prestroke mm : 4.40 Tolerance mm : +- 0.05
Customer—spec. in Customer Motor Power KW	: CDC : 6BTA-A	test only : + 0.10 Rack travel in mm : 10.50 Tolerance mm : + 1.50
TEST BENCH REQUIR	EMENTS T	Firing order : 1-5-3-6-2-
Test oil inlet temp. °C Tolerance °C	: +0 : + 2.0	Phasing : 0-60-120-180-240 : -300 Tolerance : + 0.30 Check
Overflow valve	: 1417413047	tolerance °NW : +- 0.50
Inlet press. bar	: 1.5	BEGINNING OF DELIVERY DIFFERENCE
Overflow quantity min. l/h Tolerance l/h	: 120 : ← 5.0	S.o.d. blocking Barrel no. : 1 Tolerance : + 0.10 Check tolerance °NW : + 0.23
Test nozzle holde assembly		BASIC SETTING
Opening pressure bar Tolerance bar	: 208.5 : + 1.5	Rated speed rpm : 1250
	‡	Rack travel in mm : 14.85

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Tolerance mm : ← 0.05	+ rack travel mm : 4.00 + Rated speed rpm : 1475
Del. quantity cm3/1000 strokes : 159.5	Tolerance 1/min : +- 15 rack travel mm : 0.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.50 Rated speed rpm : 1600
Check tolerance cm3/1000s. : + 4.0	LOW IDLE
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 16.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 400 rack travel mm : 5.60 Tolerance mm : + 0.10
	Rated speed rpm : 275
GUIDE SLEEVE POSITION	CRT mm min. : > 7.20
control lever position degree : - 1	CONTINUOUS-ACTION CONTROL
	+ Rated speed rpm : 423
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1250 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 159.5	Rated speed rpm : 1250 rack travel mm : 14.85 Tolerance mm : + 0.05
Tolerance cm3/1000 strokes : \(\tau \) 1.0 Check tolerance cm3/1000s. : \(\tau \) 4.0	Rated speed rpm : 800 rack travel mm : 13.30 Tolerance mm : + 0.10
Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	ANEROID/ALTITUDE COMPENSATOR TEST
cm3/1000s. : 9.0	
RATED SPEED	Rated speed rpm : 1250 Pressure hPa : 1200 rack travel mm : 14.85
control lever position degree : 60.0 tolerance degree : + 4.0	Tolerance mm : +- 0.05 MEASUREMENT
rack travel mm : 13.80 Rated speed rpm : 1295 Tolerance 1/min : +- 5	Pressure hPa : - Rated speed rpm : 1250 rack travel mm : 8.40 Tolerance mm : + 0.20

Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 755 : 13.90 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 410 : 10.65 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 290
Check speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 159.5 : ← 3.0 : ← 6.0 : 8.0 : 12.0 : 500 : 92.0
BREAKAWAY	
Rack travet in mm Rated speed rpm Tolerance 1/min	: 1295

Rated speed rpm : 100 rack travel mm : 12.40 Tolerance mm : + 0.50 Tolerance mm : 12.40
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

STARTING FUEL DELIVERY

BOSCH INJ. PUMP TEST SPECIFICATIONS Test Lines : 1680750008 Outside diameter : Note remarks 6.0 Refer to Service Info for test and x inside diameter : adjustment instructions. x length mm : 600 See microcard(s) W400/... Edition : 12.12.94 : ISO 4113 Test oil REMARKS Combination No. : 0402736812 Injection pump Pump designation : PES6P110A120RS7214 (A) INJECTION PUMP SETTING VALUES EP type number : 0412716805 Set equal delivery quant. per values _____ Governor Governer design. : RQV350...1200PA964 BEGINNING OF DELIVERY : -4K Governer no. : 0421815256 Test pressure bar : 31.0 Tolerance bar : + 1.0 Cust. part No. : 3921774 Prestroke mm : 4.40 : +- 0.05 Tolerance mm Customer-spec. information Customer : CDC test only : +- 0.10 Motor : 6CTA-A : 156.0 Power KW Rack travel in mm: 10.50 Tolerance mm : +- 1.50 TEST BENCH REQUIREMENTS Firing order : 1-5-3-6-2-Test oil inlet temp. °C Tolerance °C : 0-60-120-180-240 2.0 Phasing : -300 Tolerance : + 0.30: 1417413047 Overflow valve Check tolerance °NW : + 0.50Inlet press. bar : 1.5 BEGINNING OF DELIVERY DIFFERENCE Overflow quantity min. L/h min. L/h Tolerance l/h : 120 Time to cyl. no. : S.o.d. blocking Test nozzle holde Barrel no. : 1688901101 : + 0.10assembly Tolerance Check Opening pressure : + 0.23tolerance "NW Tolerance bar : + 1.5 BASIC SETTING

Rated speed rpm :	1200	control lever	
Rack travel in mm : Tolerance mm :	12.35 + 0.05	position degree tolerance degree	: +- 4.0
Del. quantity cm3/1000 strokes :	148.5	rack travel mm Rated speed rpm Tolerance 1/min	: 1250
Tolerance cm3/1000 strokes :	+ 1.0	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1380 : + 15
Check tolerance cm3/1000s.	+ 4.0	rack travel mm Tolerance mm	: 0.50 : + 0.50
Spreed Tolerance cm3/1000 strokes :	5.0	Rated speed rpm	
Check tolerance		LOW IDLE	
cm3/1000S. :	9.0	control lever position degree tolerance degree	: 65.0 : +- 4.0
WITH GOVERNOR	‡	Testing:	
GUIDE SLEEVE POSITI	ON T	Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.50 : ← 0.10
control lever	‡	Rated speed rpm	: 275
position degree : Rated speed rpm :	1 1260	CRT mm min.	: > 7.20
Rack travel in mm : Tolerance mm :		CONTINUOUS-ACTION	CONTROL
FULL LOAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm	: 423
Rated speed rpm :	1200	TORQUE CONTROL	
Aneroid pressure hPa :	1200	Rated speed rpm	: 1200
Del. quantity cm3/1000 strokes :	148.5	rack travel mm Tolerance mm	: 12.35 : + 0.05
Tolerance cm3/1000 strokes : Check tolerance	← 1.0	Rated speed rpm rack travel mm	: 650 : 11.10
cm3/1000s. :	+ 4.0	rack travel mm Tolerance mm	: + 0.20
Tolerance cm3/1000 strokes : Check tolerance	5.0	Rated speed rpm rack travel mm Tolerance mm	: 550 : 11.00 : + 0.20
cm3/1000s. :	9.0		
RATED SPEED		ANEROID/ALTITUDE COMPENSATOR TEST	

SETTING

Rated speed rpm : 1200
Pressure hPa : 1200
rack travel mm : 12.35
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 1200
rack travel mm : 7.90
Tolerance mm : + 0.20

Rated speed rpm : 1200

Pressure hPa : 575 rack travel mm : 11.40 Tolerance mm : + 0.20

Pressure hPa : 225 rack travel mm : 8.95 Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100
Check
speed 1/min : > 80
Rated speed rpm : < 290
Check
speed 1/min : < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 650
Del. quantity
cm3/1000 strokes : 154.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000S. : + 6.0
Spreed

Tolerance cm3/1000 strokes : 8.0 Check tolerance

cm3/1000s. : 12.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 88.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1250
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0 Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 12.12.94 : ISO 4113 Test oil Combination No. : 0402736823 Injection pump Pump designation : PES6P11DA12ORS7249 : 0412716807 EP type number Governor Governer design. : RQV350...1150PA964 : -9K : 0421815295 Governer no. Cust. part No. : 3921970 Customer-spec. information : CDC Customer : 6CTA-A Motor Power KW : 187.0 TEST BENCH REQUIREMENTS Test oil inlet temo. °C Tolerance °C Overflow valve : 1419992198 Inlet press. bar : 1.5 Overflow quantity min. L/h Tolerance L/h : +- 5.0 Test nozzle holde assembly : 1688901101 Opening pressure 208.5 Tolerance bar

Test lines : 1680750008 Outside diameter : 6.0 x inside diameter : 2.0 x Length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : + 1.0Prestroke mm Tolerance mm : +- 0.05 : +- 0.10test only Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50 : 1-5-3-6-2-Firing order Phasing : 0-60-120-180-240 : -300 : + 0.30Tolerance Check tolerance "NW : +- 0.50 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : : +- 0.10 Tolerance Check : + 0.23tolerance °NW BASIC SETTING Rated speed rpm : 1150

Rack travel in mm : 14.35 Tolerance mm : + 0.05	Tolerance 1/min : +- 5 rack travel mm : 4.00
Del. quantity cm3/1000 strokes : 179.0	Rated speed rpm : 1385 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500
Check tolerance cm3/1000s. : + 4.0	LOW IDLE
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 15.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 9.0	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : + 0.10
	Rated speed rpm : 275
GUIDE SLEEVE POSITION	CRT mm min. : > 7.10
control lever position degree : -1	CONTINUOUS-ACTION CONTROL Rated speed rpm : 425
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1150 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 179.0	Rated speed rpm : 1150 rack travel mm : 14.35 Tolerance mm : + 0.05
Tolerance cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 650 rack travel mm : 11.80 Tolerance mm : + 0.20
Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	ANEROID/ALTITUDE COMPENSATOR TEST
cm3/100QS. : 9.0	SETTING
RATED SPEED control lever	Rated speed rpm : 1150 Pressure hPa : 1200 rack travel mm : 14.35 Tolerance mm : +- 0.05
position degree : 65.0 tolerance degree : + 4.0	MEASUREMENT
rack travel mm : 13.30 Rated speed rpm : 1205	Pressure hPa : - Rated speed rpm : 1150

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rack travel mm Tolerance mm	: 8.10 : +- 0.20
Rated speed rpm	: 1150
Pressure hPa rack travel mm Tolerance mm	: 860 : 13.40 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 320 : 9.65 : ← 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 290
Check speed 1/min	: < 300
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 3.0 : ← 6.0
Spreed Tolerance	. 80
cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
Aneroid pressure	
hPa Rated speed rpm Del. quantity	: – : 500
cm3/1000 strokes Tolerance	: 94.5
cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 4.0
	. 1= 4.U
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.30 : 1205 : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.40 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 26.0 Check tolerance cm3/1000s. : + 25.0

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BOSCH INJ. PUMP 1	TEST SPECIFICATIONS	x inside diameter: 2.0 x length mm : 600
Note remarks		The state of the s
Refer to Service adjustment instru See microcard(s)	Info for test and actions. W400/	REMARKS
Edition Test oil	: 12.12.94 : ISO 4113	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Combination No.	: 0402736829	per values
Injection pump Pump designation EP type number	: PES6P120A120RS7261 : 0412726876	BEGINNING OF DELIVERY
Governor Governer design.	: RQV3501100PA924 : -7K	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Governer no.		Prestroke mm : 3.55 Tolerance mm : + 0.05
Cust. part No.	: 3281842	test only : +- 0.10
		Rack travel in mm : 10.50 Tolerance mm : + 1.50
Customer—spec. in Customer Motor Power KW	: CUMMINS : 6CTAA	Firing order : 1-5-3-6-2- : 4
TEST BENCH REQUIR	EMENTS	Phasing : 0-60-120-180-240 : -300
Test oil inlet temp. °C Tolerance °C	: 40 : +- 2.0	Tolerance : +- 0.30 Check tolerance °NW : +- 0.50
Overflow valve	: 1417413047	BEGINNING OF DELIVERY DIFFERENCE S.o.d. blocking
Inlet press. bar	: 1.5	Barrel no. : 1 Tolerance : +- 0.10 Check tolerance °NW : +- 0.23
Test nozzle holde assembly	: 1688901101	
Opening pressure bar Tolerance bar	: 208.5 : + 1.5	BASIC SETTING Rated speed rpm : 1100
Test lines	: 1680750008	Rack travel in mm : 12.05 Tolerance mm : +- 0.05
Outside diameter	: 6.0	Del. quantity cm3/1000 strokes : 166.0

+	rack travel mm : 11.00
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : +- 4.0	rack travel mm : 4.00 Rated speed rpm : 1275 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 5.0	rack travel mm : 0.50 Tolerance mm : + 0.50
Check tolerance	- Rated speed rpm : 1350
cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	control lever position degree : 70.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 17.0 tolerance degree : +- 4.0
control lever	
position degree : -1 Rated speed rpm : 1400	Testing:
Rack travel in mm : 9.00 Tolerance mm : + 3.00	Rated speed rpm : 350 rack travel mm : 4.90 Tolerance mm : + 0.10
FIGURE CONTRACTOR	Rated speed rpm : 250
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250 CRT mm min. :> 6.30
Rated speed rpm : 1100 + Aneroid pressure	CRT mm min. : > 6.30
Rated speed rpm : 1100 + Aneroid pressure hPa : 1200 +	
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0	CRT mm min. : > 6.30
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0	CRT mm min. : > 6.30 CONTINUOUS-ACTION CONTROL Rated speed rpm: : 400
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	CRT mm min. : > 6.30 CONTINUOUS-ACTION CONTROL
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	CRT mm min. : > 6.30 CONTINUOUS-ACTION CONTROL Rated speed rpm: : 400 TORQUE CONTROL Rated speed rpm : 1100
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : +- 0.05 Rated speed rpm : 700
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 57.0	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 57.0 tolerance degree : + 4.0 control lever	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15
Rated speed rpm : 1100 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 57.0 tolerance degree : + 4.0	CRT mm min. : > 6.30 CONTINUOUS—ACTION CONTROL Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15 Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15 Rated speed rpm : 500

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 12.05 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 7.60 : +- 0.10
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 320 : 8.30 : + 0.20
Pressure hPa rack trävel mm Tolerance mm	: 700 : 11.15 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 270
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 700
Del. quantity cm3/1000 strokes	: 180.0
Tolerance cm3/1000 strokes	: + 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	: -

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 107.0
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.00 Rated speed rpm : 1145 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 265.0
Tolerance
cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s. : +- 19.0

J17

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.12.94 Edition Test oil : ISO 4113

Combination No. : 0402736830

Injection pump

Pump designation : PES6P110A120RS7263

EP type number : 0412716808

Governor

Governer design. : RQV350...1250PA964

: -11K Governer no.

: 0421815321

Cust. part No. : 3281780

Customer-spec. information

Customer : CUMMINS Motor : 6BTAA

Power KW : 154.8

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1680750008

Outside diameter : 6.0 x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : +- 0.05 Tolerance mm

: +- 0.10 test only

Rack travel in mm: 10.50 : ← 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : + - 0.30

Check

tolerance °NW : ← 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. Tolerance : ← 0.10 Check

tolerance °NW : +- 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.85 : + 0.05

Tolerance mm

Del. quantity cm3/1000 strokes	: 152.0	t control lever	
Tolerance cm3/1000 strokes	: + 1.0	position degree Rated speed rpm	: - 1 : 1440
Check tolerance cm3/1000s.	: +- 4.0	Rack travel in mn Tolerance mm	
Spreed Tolerance cm3/1000 strokes	: 5.0	FULL LOAD DELIVER	
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm Aneroid pressure hPa Del. quantity	: 1200
(B) SETTING OF IN WITH GOVERNOR	NECTION PUMP	cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0
GUIDE SLEEVE TRAV	/EL	+ Spreed	: +- 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1.94	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 5.0 : 9.0
Rated speed rpm guide sleeve travel mm	: 1316 : 8.13	RATED SPEED	
Tolerance mm Rated speed rpm	: +- 0.25	control lever position degree tolerance degree	: 63.0 : + 4.0
guide sleeve travel mm Tolerance mm	: 4.51 : +- 0.25	control lever position degree tolerance degree	
Rated speed rpm guide sleeve travel mm Tolerance mm	: 353 : 1.77 : + 0.25	rack travel mm Rated speed rpm Tolerance 1/min	: 13.50 : 1310
Rated speed rpm guide sleeve travel mm Tolerance mm	: 403 : 2.42 : +- 0.25	rack travel mm Rated speed rpm Tolerance 1/min	
Rated speed rpm guide sleeve travel mm	: 460 : 2.82	rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 1600
Tolerance mm	: ← 0.25	LOW IDLE	
Rated speed rpm guide sleeve travel mm Tolerance mm	: 11.50	control lever position degree tolerance degree	
GUIDE SLEEVE POSI	TION	‡	

- 1 1440 9.00 -- 3.00 FULL LOAD STOP 1100 1200 152.0 - 1.0 - 4.0 5.0 9.0 63.0 - 4.0 121.0 - 4.0 13.50 1310 5 4.00 1450 - 15 0.50 - 0.50 1600

control lever position degree : 17.0 tolerance degree : + 4.0	rack travel mm : 11.30 Tolerance mm : +- 0.20 Pressure hPa : 775
Testing:	Pressure hPa : 775 rack travel mm : 13.15 Tolerance mm : + 0.05
Rated speed rpm : 350 rack travel mm : 5.00 Tolerance mm : + 0.10	START CUT-OUT
Rated speed rpm : 250	Rated speed rpm : > 100 Check
CRT mm min. : > 6.50	speed 1/min :> 80 Rated speed rpm : < 270 Check
CONTINUOUS-ACTION CONTROL	speed 1/min : < 290
Rated speed rpm : 375	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL	Aneroid pressure hPa : 1200
TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.85 Tolerance mm : +- 0.05 Rated speed rpm : 750 rack travel mm : 12.40 Tolerance mm : +- 0.10 Rated speed rpm : 1250 rack travel mm : 14.50 Tolerance mm : +- 0.10	hPa : 1200 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 154.0
Rated speed rpm : 750	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
rack travel mm : 12.40 + Tolerance mm : + 0.10	cm3/1000s. : +- 6.0 Spreed Tolerance
Rated speed rpm : 1250 rack travel mm : 14.50 Tolerance mm : + 0.10	cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
Rated speed rpm : 400 + rack travel mm : 11.65 + Tolerance mm : + 0.15	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
SETTING	cm3/1000s. : +- 4.0
Rated speed rpm : 1250 Pressure hPa : 1200 rack travel mm : 14.50 Tolerance mm : + 0.10	BREAKAWAY
MEASUREMENT . TO 0.10	Rack travel in mm : 13.50 Rated speed rpm : 1310 Tolerance 1/min : +- 5
Pressure hPa :	STARTING FUEL DELIVERY
Rated speed rpm : 1250	Rated speed rpm : 100
Pressure hPa : 570	rack travel mm : 12.50 Tolerance mm : +- 0.50

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Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

	4	_
BOSCH INJ. PUMP	TEST SPECIFICATIONS	- x inside diameter : 2.0 - x Length mm : 600
Note remarks		. Congri ani
Refer to Service adjustment instr See microcard(s)	Info for test and uctions.	- REMARKS
Edition Test oil	: ISO 4113	- - (A) INJECTION PUMP SETTING VALUES - Set equal delivery quant.
Combination No.	: 0402736831	per values
Injection pump Pump designation EP type number	: PES6P120A120RS7261 : 0412726876	BEGINNING OF DELIVERY
Governor Governer design.	: RQV3501100PA924 : -8K	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Governer no.		Prestroke mm : 3.55 Tolerance mm : + 0.05
Cust. part No.	: 3281841	test only : +- 0.10
•		Rack travel in mm : 10.50 Tolerance mm : +- 1.50
Customer—spec. in Customer Motor Power KW	: CUMMINS +	Firing order : 1-5-3-6-2- : 4
TEST BENCH REQUIR	REMENTS	Phasing : 0-60-120-180-240 : -300
Test oil inlet	‡	Tolerance : +- 0.30 Check
temp. °C Tolerance °C	: + 40 : + 2,0	tolerance °NW : +- 0.50
Overflow valve	Ţ	BEGINNING OF DELIVERY DIFFERENCE
Inlet press. bar	: 1.5	S.o.d. blocking Barrel no. : 1 Tolerance : + 0.10 Check
Test nozzle holde assembly	: 1688901101	tolerance °NW : +- 0.23
Opening pressure bar Tolerance bar	: 208.5 : + 1.5	BASIC SETTING Rated speed rpm : 1100
Test lines	: 1680750008	Rack travel in mm : 10.85 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes :

145.0

Outside diameter :

6.0

Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 4.00 Rated speed rpm : 1255 Tolerance 1/min : +- 15
Check tolerance cm3/1000s. : + 4.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350
Spreed Tolerance cm3/1000 strokes : 5.0	LOW IDLE
Check tolerance cm3/1000s. : 9.0	control lever position degree : 68.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10
‡	Rated speed rpm : 250
control lever position degree : -1 Rated speed rpm : 1400	CRT mm min. : > 6.60
Rack travel in mm: 9.00	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 3.00	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	TARALE CANTRAL
Rated speed rpm : 1100	TORQUE CONTROL
Aneroid pressure + 900 +	Rated speed rpm : 1100 rack travel mm : 10.85
Del. quantity	Tolerance mm : +- 0.05
cm3/1000 strokes : 145.0 Tolerance	Rated speed rpm : 700
cm3/1000 strokes : + 1.0 +	rack travel mm : 10.00
Check tolerance cm3/1000S. : + 4.0	Tolerance mm : + 0.10
Spreed	Rated speed rpm : 900
Tolerance cm3/1000 strokes : 5.0	rack travel mm : 10.35 Tolerance mm : +- 0.15
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 400
. , , , , , , , , , , , , , , , , , , ,	rack travel mm : 9.15 Tolerance mm : + 0.15
RATED SPEED	roterance mm : == 0.15
control lever	ANEROID/ALTITUDE COMPENSATOR TEST
position degree : 113.0 + tolerance degree : + 4.0 +	
+	SETTING
Rated speed rpm : 1145 +	Rated speed rpm : 1100
Tolerance 1/min : +- 5	Pressure hPa : 900 rack travel mm : 10.85

Tolerance mm	
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 7.70 : + 0.10
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 320 : 8.50 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 560 : 10.25 : +- 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
	: > 80
speed 1/min Rated speed rpm	: > 80 : < 270
Rated speed rpm Check speed 1/min	: < 270 : < 290
Rated speed rpm Check	: < 270 : < 290 RACTERISTICS : 900 : 700

Rack travel in mm : 9.80
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

100 Rated speed rpm : Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s.

: +- 19.0

Note remarks	‡	Outside diameter : 6.0
Refer to Service adjustment instru See microcard(s)	Info for test and ctions.	x inside diameter : 2.0 x length mm : 600
Edition Test oil	: 12.12.94 : ISO 4113	REMARKS
Combination No.	: 0402736858	
EP type number	: PES6P110A120RS7214 : 0412716805	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
	: RQV3501200PA964 : -28K	BEGINNING OF DELIVERY
Governer no. Cust. part No.	+	Test pressure bar : 31.0 Tolerance bar : + 1.0
		Prestroke mm : 4.40 Tolerance mm : +- 0.05
Customer-spec. in Customer Motor		test only : +- 0.10
Power KW	: 156.0	Rack travel in mm : 10.50 Tolerance mm : + 1.50
TEST BENCH REQUIR	EMENTS	Firing order : 1-5-3-6-2-
Test oil inlet temp. °C Tolerance °C	:	Phasing : 0-60-120-180-240 : -300
Overflow valve	: 1417413047	Tolerance : + 0.30 Check tolerance °NW : + 0.50
Inlet press. bar	: 1.5	BEGINNING OF DELIVERY DIFFERENCE
Overflow quantity min. L/h Tolerance L/h	: 120 : ← 10.0	S.o.d. blocking Barrel no. : 1 Tolerance : + 0.10 Check
Test nozzle holde assembly	: 1688901101	tolerance °NW : + 0.23
Opening pressure bar Tolerance bar	: 208.5 : +- 1.5	BASIC SETTING Rated speed rpm : 1200
	+	

BOSCH INJ. PUMP TEST SPECIFICATIONS

Test lines : 1680750008

+	
Rack travel in mm: 12.35 Tolerance mm: + 0.05	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Del. quantity cm3/1000 strokes : 148.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1200 Aneroid pressure hPa : 1200
Check tolerance cm3/1000S. : +- 4.0	Del. quantity cm3/1000 strokes : 148.5
Spreed Tolerance cm3/1000 strokes : 5.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : 9.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 350 guide sleeve	control lever position degree : 119.0 tolerance degree : +- 4.0
travel mm : 1.80 Tolerance mm : + 0.20	rack travel mm : 11.30 Rated speed rpm : 1250
Rated speed rpm : 1200	Tolerance 1/min : +- 5 rack travel mm : 4.00
Tolerance mm : + 0.10	Rated speed rpm : 1380 Tolerance 1/min : + 15
Rated speed rpm : 450 guide sleeve travel mm : 3.30 Tolerance mm : + 0.20	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500
Rated speed rpm : 700 guide sleeve travel mm : 6.10	LOW IDLE
travel mm : 6.10 Tolerance mm : + 0.20 Rated speed rpm : 1400	control lever
guide sleeve travel mm : 10.90	position degree : 65.0 tolerance degree : +- 4.0
Tolerance mm : + 0.20	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : +- 0.10
control lever	Rated speed rpm : 275
position degree : -1 Rated speed rpm : 1330	CRT mm min. : > 7.20

CONTINUOUS-ACTION	V CONTROL
Rated speed rpm	: 423
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 11.10 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 550 : 11.00 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	The Control of Control of the Control of Con
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 1200 : 12.35 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: − : 1200 : 7.90 : ← 0.20
Rated speed rpm	: 1200
Pressure hPa rack travel mm Tolerance mm	: 575 : 11.40 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 225 : 8.95 : + 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
check speed 1/min Rated speed rpm Check	: > 80 : < 290
speed 1/min	: < 300

FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 650
Del. quantity cm3/1000 strokes Tolerance	: 154.0
cm3/1000 strokes Check tolerance	:
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes Tolerance	: 91.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000S.	: +- 4.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1250
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes	:	155.0
Tolerance cm3/1000 strokes	: +	- 20.0
Check tolerance cm3/1000s.	: +	- 25.0

Note remarks	EST SPECIFICATIONS	x inside diameter: 2.0 x length mm : 600
Refer to Service adjustment instru See microcard(s)	Info for test and ctions. W400/	REMARKS
Edition Test oil	: 12.12.94 : ISO 4113	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Combination No.	: 0402736859	per values
Injection pump Pump designation EP type number	: PES6P120A120RS7261 : 0412726876	BEGINNING OF DELIVERY
	: RQV3501100PA924 : -10K	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Governer no.	: 0421815429	Prestroke mm : 3.55 Tolerance mm : + 0.05
Cust. part No.	: 3282465	test only : +- 0.10
——————————————————————————————————————		Rack travel in mm : 10.50 Tolerance mm : +- 1.50
Customer—spec. in Customer Motor Power KW	: CUMMINS : 6CTAA	Firing order : 1-5-3-6-2-
TEST BENCH REQUIR	EMENTS	+ Phasing : 0-60-120-180-240 : -300
est oil inlet emp. °C olerance °C	: 40 : +- 2.0	Tolerance : + 0.30 Check tolerance °NW : + 0.50
Overflow valve	: 1417413047	BEGINNING OF DELIVERY DIFFERENCE
nlet press. bar	: 1.5	S.o.d. blocking Barrel no. : 1 Tolerance : +- 0.10 Check
Test nozzle holde assembly	: 1688901101	tolerance °NW : + 0.23
Opening pressure Dar Tolerance bar	: 208.5 : + 1.5	BASIC SETTING Rated speed rpm : 1100
Test lines	: 1680750008	Rack travel in mm : 10.85 Tolerance mm : + 0.05
Outside diameter	: 6.0	Del. quantity cm3/1000 strokes : 145.0

Tolerance				
Rated speed rpm : 1350		: + 1.0	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1255 : ← 15
Spreed Tolerance Cm3/1000 strokes : 5.0		: + 4.0	Tolerance mm	: 0.50 : +- 0.50 : 1350
cm3/1000S. : 9.0 control lever position degree : 68.0 tolerance degree : + 4.0 GUIDE SLEEVE POSITION Testing: Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 5.10 Tolerance mm : + 0.10 CRT mm min. : > 6.60 Rated speed rpm : 1400 CRT mm min. : > 6.60 Rated speed rpm : 400 Rack travel in mm : 9.00 Tolerance mm : + 3.00 CONTINUOUS-ACTION CONTROL Rated speed rpm : 400 Rated speed rpm : 1100 Aneroid pressure lpa : 900 pel. quantity cm3/1000 strokes : 145.0 Tolerance mm : + 0.05 tolerance mm : + 0.05 tolerance mm : + 0.00 tolerance mm : + 0.00 tolerance mm : + 0.00 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.15 tolerance mm :	Tolerance	: 5.0		
cm3/1000S. : 9.0 control lever position degree : 68.0 tolerance degree : + 4.0 GUIDE SLEEVE POSITION Testing: Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 5.10 Tolerance mm : + 0.10 CRT mm min. : > 6.60 Rated speed rpm : 1400 CRT mm min. : > 6.60 Rated speed rpm : 400 Rack travel in mm : 9.00 Tolerance mm : + 3.00 CONTINUOUS-ACTION CONTROL Rated speed rpm : 400 Rated speed rpm : 1100 Aneroid pressure lpa : 900 pel. quantity cm3/1000 strokes : 145.0 Tolerance mm : + 0.05 tolerance mm : + 0.05 tolerance mm : + 0.00 tolerance mm : + 0.00 tolerance mm : + 0.00 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.10 tolerance mm : + 0.15 tolerance mm :	Charle talanana	+		
## Testing: ## Rated speed rpm : 350 ## rack travel mm : 5.10 ## Tolerance mm : + 0.10 ## Rated speed rpm : 250 ## CONTINUOUS—ACTION CONTROL ## Rated speed rpm : 400 ## Rated speed rpm : 400 ## Rated speed rpm : 1100 ## Rated speed rpm : 10.85 ## Tolerance mm : + 0.05 ## Tolerance mm : + 0.05 ## Rated speed rpm : 700 ## rack travel mm : 10.00 ## Tolerance mm : + 0.10 ## Rated speed rpm : 700 ## Rated speed rpm : 900 ## Rated speed rpm : 900 ## Rated speed rpm : 900 ## Rated speed rpm : 400 ## Rated spe	cm3/1000s.	+	position degree	
GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 6.60 Rated speed rpm : 1400 Rack travel in mm : 9.00 Tolerance mm : + 3.00 Rated speed rpm : 400 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 900		JECTION PUMP	Testing:	
Tolerance mm : + 0.10		+	Rated speed rpm	: 350
control lever position degree : - 1 Rated speed rpm : 1400 CRT mm min. : > 6.60 Rack travel in mm : 9.00 Tolerance mm : + 3.00 CONTINUOUS-ACTION CONTROL FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 400 Rated speed rpm : 1100 Aneroid pressure hPa : 900 pel. quantity cm3/1000 strokes : 145.0 Tolerance mm : + 0.05 cm3/1000 strokes : 145.0 Tolerance mm : + 0.00 Tolerance mm : + 0.00 Tolerance mm : + 0.10 Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : + 0.10 cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Tolerance mm : + 0.15 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 RATED SPEED Rated speed rpm : 9.00 rack travel mm : 9.15 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Dolerance mm : + 0.15	GUIDE SLEEVE POSI	TION	rack travel mm Tolerance mm	: 5.10 : + 0.10
CRT mm min.		‡	Rated speed rpm	: 250
Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s : + 4.0 Spreed Tolerance cm3/1000s : 9.0 Rated speed rpm : 1100 Rated speed rpm : 10.85 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : + 0.10 Rated speed rpm : 700 rack travel mm : 10.00 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 900 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST position degree : + 4.0 rack travel mm : 9.80 Rated speed rpm : 400 SETTING Rated speed rpm : 400 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15	position degree	: - 1	CRT mm min.	: > 6.60
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 900	Rack travel in mm	: 9.00	CONTINUOUS-ACTION	CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : 900	Tolerance mm	: + 3.00	Rated speed rpm	: 480
Rated speed rpm : 1100 Aneroid pressure hPa : 900	EHL LOAD DELTVED	V AT FULL LOAD STOP		
Aneroid pressure hPa : 900		+	TORQUE CONTROL	
Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Tolerance cm3/1000s. : 9.0 Rated speed rpm : 900 Rated speed rpm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Page 113.0 rack travel mm : 9.80 Rated speed rpm : 1100 Rated speed rpm : 1100		 	Rated speed rpm	: 1100
Tolerance cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Tolerance cm3/1000 strokes : 5.0 Tolerance cm3/1000 strokes : 5.0 Tolerance cm3/1000 strokes : 5.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Fack travel cm : 9.80 Rated speed rpm : 1100 Rated speed rpm : 1100		: 900 +	rack travel mm	: 10.85
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Position degree : + 4.0 rack travel mm : 9.80 Rated speed rpm : 1100	cm3/1000 strokes	: 145.0	loterance mm	: +- 0.05
Spreed Tolerance Tolerance Cm3/1000 strokes: 5.0 Check tolerance Cm3/1000S. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST rack travel rm : 9.80 Rated speed rpm : 1100	Tolerance	+	Rated speed rpm	: 700
Spreed Tolerance Tolerance Cm3/1000 strokes: 5.0 Check tolerance Cm3/1000S. : 9.0 Rated speed rpm : 900 rack travel mm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST rack travel rm : 9.80 Rated speed rpm : 1100	Cm3/1000 strokes	: + 1.0	rack travel mm	: 10.00
Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 10.35 Tolerance mm : + 0.15 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST rack travel mm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100	cm3/1000S.	: +- 4.0		
Check tolerance cm3/1000S. : 9.0 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Position degree : 113.0 tolerance degree : + 4.0 Rated speed rpm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100	spreed	<u>†</u>	Rated speed rpm	: 900 · 10.35
Check tolerance cm3/1000S. : 9.0 Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : + 0.15 RATED SPEED RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Compensator degree : + 4.0 rack travel mm : 9.80 rack travel mm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100	cm3/1000 strokes	: 5.0 I	Tolerance mm	: + 0.15
RATED SPEED RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST COMPENSATOR TEST COMPENSATOR TEST SETTING rack travel mm : 9.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 9.80 Rated speed rpm : 1100	Check talerance	1		
RATED SPEED ANEROID/ALTITUDE COMPENSATOR TEST Position degree : +- 4.0 tolerance degree : +- 4.0 rack travel rm : 9.80 Rated speed rpm : 1145 Rated speed rpm : 1100	CHIST TOOUS.	. 9.0	rack travel mm	9.15
control lever position degree : 113.0 +	RATED SPEED	<u> </u>	iolerance mm	: +- 0.15
control lever position degree : 113.0 +		+	ANEDOTO / AL TITUDE	
position degree : 113.0 + tolerance degree : + 4.0 + SETTING + SETTING + Rated speed rpm : 1100	control lever	<u> </u>		
rack travel mm : 9.80 + Rated speed rpm : 1100	position degree	: 113.0 +		
rack travel mm : 9.80 + Rated speed rpm : 1100	_	1	SETTING	
Rated speed rpm : 1145	rack travel mm	: 9.80		
rack travel mm : 10.85	Rated speed rpm	: 1145	Rated speed rpm	: 1100
	TOTETANCE TYMIN	· —) †	rack travel mm	: 10.85

	: +- 0.05	
Tolerance mm		
MEASUREMENT		
Descripe LDs		
Pressure hPa		
Rated speed rpm		
rack travel mm		
Tolerance mm	: ← 0.10	
Rated speed rpm	: 1100	
, .		
Pressure hPa	: 320	
rack travel mm	: 8.50	
Tolerance mm	: ← 0.20	
Pressure hPa	: 560	
rack travel mm	: 10.25	
Tolerance mm	: +- 0.05	
் சுரு மான் பெரும் (EEI)	. 0.00	
START CUT-OUT		
Rated speed rpm	: > 100	
Check	. / 100	
speed 1/min	: > 80	
Speed Iviliti	. / 00	
Dated cheer new		
Rated speed rpm	: < 270	
Check	: < 270	
Check speed 1/min FUEL DELIVERY CHA	: < 270 : < 290	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: < 270 : < 290 RACTERISTICS : 900 : 700	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0 : 12.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0 : 12.0 : 500	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0 : 12.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : +- 3.0 : +- 6.0 : 8.0 : 12.0 : 500 : 107.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : + 3.0 : + 6.0 : 8.0 : 12.0 : 500	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: < 270 : < 290 RACTERISTICS : 900 : 700 : 150.0 : +- 3.0 : +- 6.0 : 8.0 : 12.0 : 500 : 107.0	

Rack travel in mm : 9.80
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 265.0
Tolerance

Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

K02

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402736860 Injection pump Pump designation : PES6P110A120RS7214 EP type number : 0402716805 Governor Governer design. : RQV350...1200PA964 : -29K : 0421815430 Governer no. Cust. part No. : 3282466 Customer-spec. information Customer : CDC Motor : 6CTA-A Power KW : 187.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 : 1417413047 Overflow valve Inlet press. bar : 1.5 Overflow quantity 120 min. L/h Tolerance l/h 5.0 Test nozzle holde : 1688901101 assembly

208.5

```
Outside diameter :
                        6.0
x inside diameter :
                         2.0
                     600
x Length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar
Prestroke mm
                       4,40
Tolerance mm
                  : +- 0.05
test only
                 : + 0.10
Rack travel in mm: 10.50
Tolerance mm
                 : + 1.50
Firing order
                 : 1-5-3-6-2-
                 : 4
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : + - 0.30
Check
                 : + - 0.50
tolerance "NW
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
Tolerance
                 : + - 0.10
Check
tolerance °NW
                 : +- 0.23
BASIC SETTING
Rated speed rpm
                     1200
```

: 1680750008

Test Lines

bar

Opening pressure

Tolerance bar

Rack travel in mm : 14.55 Tolerance mm : + 0.05	tolerance degree : + 4.0 control lever
Del. quantity cm3/1000 strokes : 184.0	position degree : 119.0 tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 13.50 Rated speed rpm : 1250 Tolerance 1/min : + 5
Check tolerance cm3/1000s. ; +- 4.0	rack travel mm : 4.00 Rated speed rpm : 1410 Tolerance 1/min : + 15
Spreed Tolerance cm3/1000 strokes : 5.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500
Check tolerance cm3/1000s. : 9.0	LOW IDLE
	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 65.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever position degree : 15.0 tolerance degree : + 4.0
corcrol lever position degree : - 1 Rated speed rpm : 1330	Testing:
Rack travel in mm : 16.50 Tolerance mm : + 1.30	Rated speed rpm : 350 rack travel mm : 5.40 Tolerance mm : + 0.10
	Rated speed rpm : 275
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	CRT mm min. : > 7.20
Aneroid pressure	CONTENT OF STATE OF S
hPa : 1200 Del. quantity	CONTINUOUS-ACTION CONTROL
cm3/1000 strokes : 184.0 Tolerance	Rated speed rpm : 425
cm3/1000 strokes : + 1.0 Check tolerance	TORQUE CONTROL
cm3/1000S. : +- 4.0 Spreed	Rated speed rpm : 1200
Tolerance cm3/1000 strokes : 5.0	rack travel mm : 14.55 Tolerance mm : +- 0.05
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 650 rack travel mm : 11.50 Tolerance mm : +- 0.20
RATED SPEED	Tolerance mm : +- 0.20
control lever position degree : 66.0	‡

ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 1200 : 14.55 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1200 : 7.70 : + 0.20
Rated speed rpm	: 1200
Pressure hPa rack travel mm Tolerance mm	: 860 : 13.40 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 320 : 9.45 : +- 0.05
START CUT-OUT	antigen selt and the terreting of a strong transfer the terreting and make the artifect of a supremental and t
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 290
speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	RACTERISTICS : 1200 : 650
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 650
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 650 : 167.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 650 : 167.5 : + 3.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 650 : 167.5 : ← 3.0 : ← 6.0

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 91.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 13.50
Rated speed rpm : 1250
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : +-20.0Check tolerance

cm3/1000S. : +- 25.0

BOSCH INJ. PUMP TEST SPECIFICATIONS		
Note remarks		
Refer to Service Info for test and adjustment instructions. See microcard(s) W400/		
Edition Test oil	: 12.12.94 : ISO 4113	
Combination No.	: 0402736861	
Injection pump Pump designation EP type number	: PES6P120A120RS7261 : 0412726876	
Governer design. Governer no.	: RQV3501100PA924 : -11K : 0421815431	
Cust. part No.	: 3282468	
Customer—spec. int Customer Motor Power KW	formation : CUMMINS : 6CTAA : 202.0	
TEST BENCH REQUIREMENTS		
Test oil inlet temp. °C Tolerance °C	: 40 : 2.0	
Overflow valve	: 1417413047	
Inlet press. bar	: 1.5	
Test nozzle holde assembly	: 1688901101	
Opening pressure bar Tolerance bar	: 208.5 : ← 1.5	
Test lines	: 1680750008	
Outside diameter	: 6.0	

```
x inside diameter: 2.0
x length mm : 600
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar : 31.0 Tolerance bar : + 1.0
Prestroke mm : 3.55
Tolerance mm : + 0.05
test only : \leftarrow 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1-5-3-6-2-
                : 0-60-120-180-240
Phasing
                 : -300
                 : +- 0.30
Tolerance
Check
tolerance °NW : +- 0.50
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
Tolerance
                 : +- 0.10
Check
                 : ← 0.23
tolerance °NW
BASIC SETTING
Rated speed rpm : 1100
Rack travel in mm : 12.05
Tolerance mm : +- 0.05
Del. quantity cm3/1000 strokes : 166.0
```

-	rack travel mm : 11.00
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : +- 4.0	rack travel mm : 4.00 Rated speed rpm : 1275 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 5.0	rack travel mm : 0.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : 9.0	Rated speed rpm : 1350
	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 70.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 17.0 tolerance degree : + 4.0
control lever position degree : - 1 Rated speed rpm : 1400	Testing:
Rack travel in mm : 9.00 Tolerance mm : + 3.00	Rated speed rpm : 350 rack travel mm : 4.90 Tolerance mm : + 0.10
	Rated speed rpm : 250
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 6.30
Rated speed rpm : 1100 + Aneroid pressure	
hPa : 1200 +	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 166.0 + Tolerance +	Rated speed rpm : 400
cm3/1000 strokes : + 1.0 Check tolerance	TORQUE CONTROL
cm3/1000s. : + 4.0	
Spreed Tolerance +	Rated speed rpm : 1100 rack travel mm : 12.05
cm3/1000 strokes : 5.0 + Check tolerance	Tolerance mm : ← 0.05
cm3/1000s. : 9.0	Rated speed rpm : 700 rack travel mm : 11.30 Tolerance mm : + 0.10
RATED SPEED	
control lever	Rated speed rpm : 900 rack travel mm : 11.55 Tolerance mm : + 0.15
position degree : 57.0 tolerance degree : + 4.0	Rated speed rpm : 500 rack travel mm : 10.55 Tolerance mm : +- 0.15
control lever position degree : 115.0 tolerance degree : + 4.0	Tolerance mm : +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 12.05 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: : 1100 : 7.60 : +- 0.10
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 320 : 8.30 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 700 : 11.15 : ← 0.05
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 270
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 700
Del. quantity cm3/1000 strokes	: 180.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	: -

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 107.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000S. : + 4.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 265.0
Tolerance
cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 12.12.94 : ISO 4113 Test oil

Combination No. : 0402736862

Injection pump

Pump designation : PES6P110A120RS7214

EP type number : 0412716805

Governor

Governer design. : RQV350...1200PA964

: -30K

: 0421815432 Governer no.

Cust. part No. : 3282469

Customer-spec. information

: CUMMINS Customer Motor : 6CTA-A

: 213.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Overflow quantity

min. L/h Tolerance 1/h : +- 5.0

Test nozzle holde

assembly : 1688901101

Opening pressure

208.5 bar Tolerance bar

Test lines : 1680750008

Outside diameter : 6.0

2.0 x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: Tolerance bar : + 1.0

Prestroke mm Tolerance mm : +- 0.05

: + 0.10test only

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30Tolerance

Check

tolerance °NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. Tolerance : ← 0.10

Check

tolerance "NW : +- 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.75 Tolerance mm: + 0.05	tolerance degree : +- 4.0 control lever
Del. quantity cm3/1000 strokes : 192.5	position degree : 122.0 tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 13.20 Rated speed rpm : 1250 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1405
Spreed Tolerance cm3/1000 strokes : 5.0	Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500
Check tolerance cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 67.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 15.0 tolerance degree : + 4.0
control lever position degree : -1 Rated speed rpm : 1260	Testing:
Rack travel in mm : 16.50 Tolerance mm : + 1.30	Rated speed rpm : 350 rack travel mm : 5.70 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 275
Rated speed rpm : 1100	CRT mm min. : > 7.20
Aneroid pressure hPa : 1200	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 192.5 Tolerance	Rated speed rpm : 423
cm3/1000 strokes : + 1.0	TORQUE CONTROL
Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 1100 rack travel mm : 14.75 Tolerance mm : + 0.05
cm3/1000s. : 9.0	Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : + 0.20
control lever position degree : 66.0	Rated speed rpm : 1200 rack travel mm : 14.30 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST	Philips and comment of the confliction for the confliction of the conf
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 14.75 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 8.00 : + 0.20
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 785 : 13.00 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 335 : 9.65 : + 0.05
START CUT-OUT	
Rated speed rpm Check speed 1/min Rated speed rpm Check speed 1/min	: > 100 : > 80 : < 290 : < 300
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance	: + 3.0 : + 6.0 : 8.0
cm3/1000s.	: 12.0
Aneroid pressure	_

```
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 92.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000S. : + 4.0
```

BREAKAWAY

Rack travel in mm : 13.20 Rated speed rpm : 1250 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

K11

hPa

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition : ISO 4113 Test oil Combination No. : 0402736863 Injection pump Pump designation : PES6P120A120RS7206 EP type number : 0412726835 Governor Governer design. : RQV350...1100PA924 : -12K : 0412815433 Governer no. Cust. part No. : 3282473 Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 202.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413047 Overflow quantity min. L/h : 165 Tolerance l/h Test nozzle holde : 1688901101 assembly Opening pressure 208.5 Tolerance bar Test lines : 1680750008 Outside diameter : 6.0

```
x inside diameter :
                      2.0
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : + 1.0
Prestroke mm
Tolerance mm
                : ← 0.05
                : +- 0.10
test only
Rack travel in mm: 10.50
Tolerance mm : + 1.50
Firing order
                : 1-5-3-6-2-
                : 0-60-120-180-240
Phasing
                : -300
Tolerance
                : +- 0.30
Check
tolerance °NW
                : + 0.50
BEGINNING OF DELIVERY DIFFERENCE
S.o.d. blocking
Barrel no.
Tolerance
                : + 0.10
Check
                : +- 0.23
tolerance °NW
BASIC SETTING
Rated speed rpm
                   1100
Rack travel in mm: 12.15
Tolerance mm : + 0.05
Del. quantity
cm3/1000 strokes :
```

	44.40
Tolerance	
cm3/1000 strokes : +- 1.0	Tolerance 1/min : + 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1275 + Tolerance 1/min : +- 15
Spreed	T TOTE AND THE TOTAL TO
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : 5.0	+ Tolerance mm : + 0.50
Check tolerance	+ Rated speed rpm : 1350
cm3/1000s. : 9.0	
	+ LOW IDLE
(D) CETTING OF THE ESTADE WHO	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	t control lever
MILL GOACIMON	position degree : 75.0
	tolerance degree : + 4.0
CHIEF OF FOR PARTITION	
GUIDE SLEEVE POSITION	+ control lever + position degree : 17.0
	tolerance degree : +- 4.0
control lever	+
position degree : - 1	+ Testing:
Rated speed rpm : 1420	Rated speed rpm : 350
Rack travel in mm : 9.00	Rated speed rpm : 350 rack travel mm : 5.30
Tolerance mm : + 3.00	rack travel mm : 5.30 Tolerance mm : + 0.10
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250
FOLE EDAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 6.80
Rated speed rpm : 1100	1 2 0.00
Aneroid pressure	
hPa : 1200	+ CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 159.0	Rated speed rpm : 450
Tolerance	+ 10000 Speed 1 pm - 450
cm3/1000 strokes : +- 1.0	
Check tolerance cm3/1000S. : +- 4.0	TORQUE CONTROL
Spreed : +- 4.0	Rated speed rpm : 1100
Tolerance	rack travel mm : 12.15
cm3/1000 strokes : 5.0	rack travel mm : 12.15 Tolerance mm : +- 0.05
Check tolerance cm3/1000s. : 9.0	+ Rated speed rpm : 600
Chist 10003 9.0	+ Rated speed rpm : 600 + rack travel mm : 11.20
	- + Tolerance mm : + 0.10
RATED SPEED	+
	Rated speed rpm : 800
control lever	rack travel mm : 11.80 Tolerance mm : + 0.10
position degree : 57.0	1 1000,0,100 11111
tolerance degree : +- 4.0	
control lever	+ ANEROID/ALTITUDE
position degree : 115.0	COMPENSATOR TEST
tolerance degree : +- 4.0	+
-	+ SETTING

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 8.20 : + 0.10
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 300 : 8.90 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.20 : + 0.10
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 270
speed 1/min	: < 290
speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	RACTERISTICS : 1200 : 600
speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 600 : 177.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	RACTERISTICS : 1200 : 600
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 600 : 177.0 : + 3.0
speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 600 : 177.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 1200 : 600 : 177.0 : + 3.0 : + 6.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aperoid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 600 : 177.0 : +- 3.0 : +- 6.0 : 8.0 : 12.0

BREAKAWAY

Rack travel in mm : 11.10
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 245.0
Tolerance
cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : \leftarrow 14.0

BOSCH INJ. PUMP T	TEST SPECIFICATIONS	Outside diameter : 8.0
Note remarks	<u>†</u>	x inside diameter : 3.0 x Length mm : 600
Refer to Service adjustment instru See microcard(s)		
Edition Test oil	: 16.01.95 : ISO 4113	REMARKS
Combination No.	: 0402746931	
Injection pump Pump designation EP type number	: PES6P120A320RS7236 : 0412726848	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Governor Governer design.	: RQV2751000PA1001	per values
Governer no.		BEGINNING OF DELIVERY
Cust. part No.	: CCEP5128A 66-194	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Customer—spec. in Customer Motor Power KW	formation : RVI : MIDR 063540 N/3 : 283.0	Prestroke mm : 4.55 Tolerance mm : + 0.05 test only : + 0.10 Rack travel in mm : 19.50
TEST BENCH REQUIR	EMENTS	Tolerance mm : +- 1.50
Test oil inlet temp. °C Tolerance °C	: 40 : + 2.0	Firing order : 1-5-3-6-2- : 4 Phasing : 0-60-120-180-240
Overflow valve	: 2417413071	: −300 Tolerance : + 0.30 Check
Inlet press. bar Tolerance bar	: 2.5 : + 0.1	tolerance "NW : +- 0.75
	+	BEGINNING OF DELIVERY DIFFERENCE
Test nozzle holde assembly	: 1688901105	Time to cyl. no. : 1
Opening pressure bar Tolerance bar	: 208.5 : + 1.5	BASIC SETTING
Lube oil	: 1409918004	Rated speed rpm : 600
Test lines	: 1680750089	Rack travel in mm : -7.25

Tolerance mm : +- 0.30	†
Del. quantity cm3/1000 strokes : 74.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : +- 1.0	control lever position degree : - 1
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1190 Rack travel in mm : 13.20
Spreed	Tolerance mm : +- 1.30
Tolerance - cm3/1000 strokes : 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 7.0	Rated speed rpm : 600 Aneroid pressure hPa : 1000
Rated speed rpm : 600	Del. quantity cm3/1000 strokes : 290.0 Tolerance
Rack travel in mm : 13.35 Tolerance mm : + 0.05	cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0
Del. quantity - cm3/1000 strokes : 290.0 -	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : + 2.0 -	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : +- 5.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 301.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 12.0	rack travel mm : -1.00 Rated speed rpm : 1070
2nd speed rpm : 300	Tolerance 1/min : +- 5
Rack travel in mm : -8.20 - Tolerance mm : +- 0.20 - Del. quantity	rack travel mm : -9.30 Rated speed rpm : 1205 Tolerance 1/min : +- 15
cm3/1000 strokes : 31.0 - Tolerance -	- rack travel mm : -12.85
cm3/1000 strokes : +- 2.5 Check tolerance cm3/1000s. : +- 5.0	- Tolerance mm : +- 0.55 - Rated speed rpm : 1350
Spreed Tolerance cm3/1000 strokes : 6.0	- LOW IDLE
Check tolerance cm3/1000s. : 10.0	control lever position degree : 247.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 - Testing:

		L
Rated speed rpm	: 300	
rack travel mm	: -8.20	+ FUEL DELIVERY CHARACTERISTICS
Tolerance mm	: ← 0.10	Aneroid pressure
Rated speed rpm	: 200	+ hPa : 1000
		+ Rated speed rpm : 600
CRT mm max.	: < -6.80	+ Del. quantity
***************************************		+ cm3/1000 strokes : 74.0 - + Tolerance
CONTINUOUS-ACTION	N CONTROL	- cm3/1000 strokes : + 1.0
~	7.5	+ Check tolerance
Rated speed rpm	: 365	+ cm3/1000s. : +- 4.0
		Spreed Tolerance
TORQUE CONTROL		cm3/1000 strokes : 4.0
Date - 1 1	4000	- Check tolerance
Rated speed rpm Tolerance mm	: 1000 : +- 0.10	+ cm3/1000s. : 7.0
rocer arice tikil	. , 0.10	Aneroid pressure
Rated speed rpm		∔ hPa : 1000
rack travel mm		Rated speed rpm : 1000
Tolerance mm	: +- 0.10	+ Del. quantity + cm3/1000 strokes : 270.0
		- Tolerance
ANEROID/ALTITUDE		+ cm3/1000 strokes : +- 4.0
COMPENSATOR TEST		+ Check tolerance + cm3/1000s. : + 7.0
		† Clib710005. : †= 7.0
SETTING		Aneroid pressure
Data damand		+ hPa : 1000
Rated speed rpm Pressure hPa	: 500 : 1000	Rated speed rpm : 600 Del. quantity
rressure m a	. 1000	cm3/1000 strokes : 159.0
MEASUREMENT		Tolerance
Pressure hPa		+ cm3/1000 strokes : +- 5.0 + Check tolerance
Rated speed rpm	: 500 : -3.80	- cneck toterance - cm3/1000s. : +- 8.0
rack travel mm		Spreed
Tolerance mm	: + 0.30	+ Tolerance
Rated speed rpm	: 500	cm3/1000 strokes : 8.0 Check tolerance
nacca speca i pii	. 500	- cm3/1000s. : 12.0
Pressure hPa	: 240	+
rack travel mm Tolerance mm	: -2.60 : +- 0.20	+ Aneroid pressure + hPa : -
rocerance min	. +- 0.20	Rated speed rpm : 500
Pressure hPa	: 480	+ Del. quantity
rack travel mm	: -0.75	- cm3/1000 strokes : 167.0
Tolerance mm	: +- 0.05	+ Tolerance + cm3/1000 strokes : +- 1.0
***************************************		Check tolerance
START CUT-OUT		+ cm3/1000s. : + 4.0
Pated cheed **	: > 100	
Rated speed rpm Check	: > 100	BREAKAWAY
speed 1/min	: > 80	+
Rated speed rpm	: < 195	Pools Annual in the A 00
Check speed 1/min	: < 215	Rack travel in mm : -1.00 Rated speed rpm : 1070
		1 Marca spesa (pili : 1010

Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0 LOW IDLE 300 Rated speed rpm -8.20 rack travel mm 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

	+	x length mm : 600
BOSCH INJ. FUMP T	EST SPECIFICATIONS	7 Congon 11411 C 300
Note remarks	1	REMARKS
Refer to Service adjustment instru See microcard(s)		Check electrically unlatched starting fuel delivery (EES) with 24 volt.
Edition Test oil	: 16.11.93 : ISO 4113	
Combination No.	: 0402746937	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Injection pump Pump designation EP type number	: PES6P120A720RS7268	per values
Governor	‡	BEGINNING OF DELIVERY
Governer design. Governer no.	: RQ275/1100PA915-2 : 0421801671	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Cust. part No.	:	Prestroke mm : 5.15 Tolerance mm : + 0.05
	<u> </u>	test only : \leftarrow 0.10
Customer—spec. in Customer Motor	: IVECO-UNIC +	Rack travel in mm : 10.50 Tolerance mm : +- 1.50
TEST BENCH REQUIR	EMENTS	Firing order : 1-5-3-6-2- : 4
Test oil inlet temp. °C Tolerance °C	: ← ⁴⁰ : ← 2.0	Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30
Overflow valve	: 1417413025	Check tolerance "NW : +- 0.75
Inlet press. bar Tolerance bar	: + 1.5 : + 0.1	BEGINNING OF DELIVERY DIFFERENCE
Test nozzle holde assembly	: 1688901105	Time to cyl. no. : 1 S.o.d. blocking Barrel no. : 1
Opening pressure bar Tolerance bar	: 208.5 : + 1.5	BASIC SETTING
Test lines	: 1680750089	Del. quantity cm3/1000 strokes : 196.0
Outside diameter	: 8.0	Tolerance
x inside diameter	: 3.0	cm3/1000 strokes : +- 1.0
K19		

Check tolerance cm3/1000s. :	+ 4.0	rack travel mm Rated speed rpm Tolerance 1/min	: 1245
Spreed			
Tolerance cm3/1000 strokes :	5.0	rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1350
Check tolerance cm3/1000s.	9.0	LOW IDLE	
Del. quantity cm3/1000 strokes :	23.0		
Tolerance cm3/1000 strokes :	+ 3.0	control lever position degree	
	+ 6.0 †	tolerance degree	: +- 4.0
Spreed Tolerance	‡	Testing:	
Check tolerance	+	Rated speed rpm rack travel mm Tolerance mm	: 275 : 6.30
cm3/1000s. :	12.0	Tolerance mm	: +- 0.10
(B) SETTING OF INJECT	TTON DUMP	rack travel mm Rated speed rpm	
WITH GOVERNOR	TOIN COLF	Tolerance 1/min	
	Ŧ	Rated speed rpm	: 100
GUIDE SLEEVE POSITIO	N F	CRT mm min.	: > 7.80
Rated speed rpm :	600		
Rack travel in mm : Tolerance mm :		ANEROID/ALTITUDE COMPENSATOR TEST	
FULL LOAD DELIVERY A	T FULL LOAD STOP		
Rated speed rpm :	1100	MEASUREMENT	
Aneroid pressure hPa :	900 ‡	Pressure hPa rack travel mm	: 240 : 9.50
Del. quantity cm3/1000 strokes :	196.0	Tolerance mm	: +- 0.10
Tolerance cm3/1000 strokes :	+	Pressure hPa rack travel mm	: 310 : 10.85
Check tolerance	+ 4.0	Tolerance mm	
Spreed Tolerance	1		
cm3/1000 strokes : Check tolerance	5.0	FUEL DELIVERY CHAP	RACTERISTICS
cm3/1000s. :	9.0	Aneroid pressure	• 000
DATES OFFE	<u> </u>	hPa Rated speed rpm	: 900 : 550
RATED SPEED	‡	Del. quantity cm3/1000 strokes	: 216.0
Rated speed rpm :	10.90 1153	Tolerance cm3/1000 strokes	: +- 3.0
Tolerance 1/min : -	- 8 +	Check tolerance cm3/1000s.	: +- 6.0

Aneroid pressure

500 Rated speed rpm Del. quantity

cm3/1000 strokes : 112.0

Tolerance

cm3/1000 strokes 1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm : 10.90

Rated speed rpm 1153 Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes :

110.0

Tolerance cm3/1000 strokes

15.0

Check tolerance cm3/1000s.

: + 19.0

LOW IDLE

Del. quantity cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000S. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

علم	
EST SPECIFICATIONS	x inside diameter : 2.0 x length mm : 600
-	A CONSTITUTE . COO
Info for test and ctions.	REMARKS
: 12.12.94 : ISO 4113	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
: 0402936001	per values
: PES6P120A320/3RS8012 : 0412926017	BEGINNING OF DELIVERY
: RQV3501100PA964	Test pressure bar : 31.0 Tolerance bar : + 1.0
: 0421815253	Prestroke mm : 4.40 Tolerance mm : +- 0.05
:	test only : \leftarrow 0.10
formation	Rack travel in mm : 10.50 Tolerance mm : +- 1.50
: CDC : 6CTA US 94 : 224.0	Firing order : 1-5-3-6-2- : 4
EMENTS -	Phasing : 0-60-120-180-240 : -300
: +40 : + 2.0	Tolerance : + 0.30 Check tolerance °NW : + 0.50
: 2417413064	BASIC SETTING
: 2.5	Rated speed rpm : 1100
: 1688901103	Rack travel in mm : 12.05 Tolerance mm : +- 0.05
: 208.5	Del. quantity cm3/1000 strokes : 113.0
: + 1.5	Tolerance cm3/1000 strokes : +- 1.0
: 1680750008 I	Spreed
	Info for test and ctions. w400/ : 12.12.94 :: ISO 4113 :: 0402936001 : PES6P120A320/3RS8012 :: 0412926017 : RQV3501100PA964 :: -1K :: 0421815253 : formation :: CDC :: 6CTA US 94 :: 224.0 MENTS : 40 :: +- 2.0 :: 2417413064 :: 2.5 :: 1688901103 :: 208.5

```
Check tolerance
cm3/1000S.
                        9.0
                                               rack travel mm
                                                                   11.00
                                               Rated speed rpm
                                                                   1145
                      350
2nd speed rpm :
                                               Tolerance 1/min : +-
                       9.50
Rack travel in mm :
                                                                      4.00
                                               rack travel mm
                                                                  1265
Tolerance mm
                       0.10
                                               Rated speed rpm :
Del. quantity
                                               Tolerance 1/min : +-
cm3/1000 strokes :
                       27.0
Tolerance
                                               rack travel mm
                                                                     0.50
                                                                : 0.50
: +- 0.50
cm3/1000 strokes : +- 3.0
                                               Tolerance mm
                                               Rated speed rpm
Spreed
Tolerance
cm3/1000 strokes :
                      8.0
Check tolerance
                                               LOW IDLE
cm3/1000S.
                       12.0
                                               control lever
(B) SETTING OF INJECTION PUMP
                                               position degree :
                                                                     66.0
WITH GOVERNOR
                                               tolerance degree : +-
                                               control lever
                                               position degree
GUIDE SLEEVE POSITION
                                               tolerance degree : +-
                                               Testing:
control lever
position degree
                                                                    350
                                               Rated speed rpm :
                                                                     5.10
Rated speed rpm : 1310
                                               rack travel mm
                                               Tolerance mm
                                                                : + - 0.10
Rack travel in mm :
                      9.00
Tolerance mm : \leftarrow 3.00
                                               CONTINUOUS-ACTION CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP
                                              Rated speed rpm :
                                                                    415
                     1100
Rated speed rpm
Aneroid pressure
                                              TORQUE CONTROL
                     1200
hPa
Del. quantity
                                                                   1100
                                              Rated speed rpm
cm3/1000 strokes :
                     113.0
                                                                    12.05
                                              rack travel mm
                                                               : +- 0.05
Tolerance
                                              Tolerance mm
cm3/1000 \text{ strokes} : +- 1.0
                                                                    850
Spreed
                                              Rated speed rpm
                                                                    13.30
Tolerance
                                              rack travel mm
cm3/1000 strokes :
                       5.0
                                                               : +- 0.20
                                               Tolerance mm
Check tolerance
cm3/1000s.
                       9.0
                                              ANEROID/ALTITUDE
                                              COMPENSATOR TEST
RATED SPEED
                                              SETTING
control lever
position degree :
                      69.0
                                              Rated speed rpm
                                                                   1100
                                              Pressure hPa :
tolerance degree : +-
                                                                   1200
                                              rack travel mm
                                                                  12.05
control lever
                                              Tolerance mm
                                                               : +- 0.05
position degree :
tolerance degree : + 4.0
                                              MEASUREMENT
```

Pressure hPa : Rated speed rpm : 1100
rack travel mm : 9.80
Tolerance mm : +- 0.10

Rated speed rpm : 1100

Pressure hPa : 200 rack travel mm : 10.35 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 47.0

Tolerance

cm3/1000 strokes : +- 1.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1145
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm : 350
rack travel mm : 9.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 27.0
Tolerance

cm3/1000 strokes : + 3.0

Spreed Tolerance

cm3/1000 strokes : 8.0 Check tolerance

cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 12.12.94 Edition Test oil : ISO 4113 Combination No. : 0402936002 Injection pump Pump designation : PES6P120A120RS8013 EP type number : 0412726018 Governor Governer design. : RQV400...1250PA964K Governer no. : 0421815252 Cust. part No. : Customer-spec. information Customer : CDC : 6BTA US 94 Motor Power KW : 172.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C : +- 2.0 Overflow valve : 2417413064 Inlet press. bar : 2.5 Test nozzle holde : 1688901103 assembly Opening pressure 208.5 Tolerance bar : 1680750008 Test lines Outside diameter : 6.0

2.0

```
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar : +- 1.0
Prestroke mm
                : +- 0.05
Tolerance mm
test only
                : +- 0.10
Rack travel in mm : 10.50
Tolerance mm
               : +- 1.50
                : 1-5-3-6-2-
Firing order
                : 0-60-120-180-240
Phasing
                : -300
Tolerance
                : +- 0.30
Check
tolerance °NW
                : + - 0.50
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. : 1
BASIC SETTING
Rated speed rpm :
                    1100
Rack travel in mm : 12.05
Tolerance mm : + 0.05
(B) SETTING OF INJECTION PUMP
WITH GOVERNOR
```

x length mm : 600

x inside diameter :

GUIDE SLEEVE POSITION	
control lever position degree : - 1 Rated speed rpm : 1470	
Rack travel in mm : 9.00 Tolerance mm : + 3.00	
FULL LOAD DELIVERY AT FULL LOA	ND STOP
Rated speed rpm : 1100 Aneroid pressure	
hPa : 1200	
RATED SPEED	
control lever position degree : 56.0 tolerance degree : +- 4.0	
control lever position degree : 113.0 tolerance degree : + 4.0	
rack travel mm : 11.00 Rated speed rpm : 1295 Tolerance 1/min : +- 5	
rack travel mm : 4.00 Rated speed rpm : 1435 Tolerance 1/min : + 15	
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500	
LOW IDLE	
control lever position degree : 70.0 tolerance degree : +- 4.0	
control lever position degree : 13.0 tolerance degree : + 4.0	
Testing:	
Rated speed rpm : 400 rack travel mm : 5.10 Tolerance mm : + 0.10	

CONTINUOUS-ACTION	CONTROL
Rated speed rpm	: 475
TORQUE CONTROL	-
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.05 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : 1200 : 12.05 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1250 : 8.50 : + 0.10
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 200 : 9.05 : +- 0.05
FUEL DELIVERY CHAR	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: – : 500
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 11.00 : 1295 : + 5

BOSCH INJ. PUMP 1	TEST SPECIFICATIONS	1 Outside diameter : 8.0
Note remarks		x inside diameter: 3.0
Refer to Service adjustment instru See microcard(s)	Info for test and uctions. W400/	x length mm : 600
Edition Test oil	: 19.01.95 : ISO 4113	REMARKS
Combination No.	: 0401646003	(A) TALLECTION DUMP CETTING VALUES
Injection pump Pump designation	: PES6R120/720LS1505 : -1	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
EP type number		BEGINNING OF DELIVERY
Governor Governer design. Governer no.	: RQV3001100R3K : 0421415004	Test pressure bar : 31.0 Tolerance bar : + 1.0
Cust. part No.	: 51.11103-7393	Prestroke mm : 5.45 Tolerance mm : +- 0.05
Cuntamon and in	format in	test only : \leftarrow 0.10
Customer-spec. in Customer Motor Power KW	: MAN : D2866LE401	Rack travel in mm : 12.00 Tolerance mm : +- 0.50
	. +0.0	Firing order : 6-2-4-1-1
TEST BENCH REQUIR	EMENTS	
Test oil inlet temp. °C	: 40	Phasing : 0-60-120-180-244 : -300
Tolerance °C	: + 2.0	Tolerance : + 0.30 Check
Overflow valve	: 1417413025	tolerance °NW : +- 0.75
Inlet press, bar Tolerance bar		BEGINNING OF DELIVERY DIFFERENCE
Fest nozzle holde assembly	: 1688901105	Time to cyl. no. : 6
Opening pressure	,	BASIC SETTING
par Tolerance bar	: 208.5 : + 1.5	Rated speed rpm : 1100
wbe oil	: 1409918004	Rack travel in mm : 15.30 Tolerance mm : +- 0.05
Test lines	: 1680750089	
_02		

Del. quantity cm3/1000 strokes : 385.0	travel mm : 2.90 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	+ Rated speed rpm : 510
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 4.02 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 1430 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 10.0	
2nd speed rpm : 325	GUIDE SLEEVE POSITION
Rack travel in mm: 5.10 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 20.0	control lever position degree : - 1 Rated speed rpm : 1230
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	Rack travel in mm: 14.30 Tolerance mm: + 1.30
cm3/1000s. : +- 6.0 Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 10.0 Check tolerance	Rated speed rpm : 1100 Aneroid pressure
cm3/1000s. : 14.0	+ hPa : 2500 - Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- cm3/1000 strokes : 385.0 - Tolerance - cm3/1000 strokes : - 1.0 - Check tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000S. : +- 4.0 - Spreed
Rated speed rpm : 325 guide sleeve travel mm : 2.12 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0
Rated speed rpm : 1164 guide sleeve	RATED SPEED
travel mm : 10.04 Tolerance mm : + 0.25	control lever position degree : 122.0
Rated speed rpm : 826 guide sleeve	tolerance degree : +- 4.0
travel mm : 6.86 Tolerance mm : +- 0.25	- rack travel mm : 14.30 - Rated speed rpm : 1152 - Tolerance 1/min : +- 8
Rated speed rpm : 338 guide sleeve travel mm : 2.28	rack travel mm : 4.00 Rated speed rpm : 1295
Tolerance mm : +- 0.25	Tolerance 1/min : +- 15
Rated speed rpm : 388	rack travel mm : 0.50

Tolerance mm Rated speed rpm	: ← 0.50 : 1425	Pressure hPa : 300 rack travel mm : 8.60 Tolerance mm : + 0.05
LOW IDLE		‡
control lever position degree tolerance degree		Rated speed rpm : > 100 Check
Testing:		speed 1/min :> 80 Rated speed rpm : < 260
Rated speed rpm rack travel mm Tolerance mm	: 325 : 5.10 : + 0.10	Check speed 1/min : < 280
Rated speed rpm		FUEL DELIVERY CHARACTERISTICS
CRT mm min.		Aneroid pressure hPa : 2500 Rated speed rpm : 900
CONTINUOUS-ACTION	CONTROL	Del. quantity cm3/1000 strokes : 353.0
Rated speed rpm	: 350	Tolerance cm3/1000 strokes : + 3.0 Check tolerance
TORQUE CONTROL		
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 15.30 : + 0.05	Aneroid pressure hPa : 2500 Rated speed rpm : 700 Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.90 : + 0.10	Aneroid pressure hPa : 2500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 327.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000S. : +- 6.0
Rated speed rpm rack travel mm Tolerance mm	: 700	cm3/1000S. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 187.0 Tolerance cm3/1000 strokes : +- 1.0
SETTING		Check tolerance cm3/1000S. : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 2500 : 15.30 : ← 0.05	BREAKAWAY
MEASUREMENT		Rack travel in mm: 14.30 Rated speed rpm: 1152
Rated speed rpm	: 1100	+ Tolerance 1/min : +- 8
Pressure hPa rack travel mm Tolerance mm	: 13.70	STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity cm3/1000 strokes : 555.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

325 Rated speed rpm 5.10 rack travel mm : +- 0.20 Tolerance mm

Del. quantity cm3/1000 strokes : 20.0 Tolerance

cm3/1000 strokes

Check tolerance cm3/1000s. 6.0

3.0

Spreed Tolerance

cm3/1000 strokes : 10.0

Check tolerance cm3/1000s.

14.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.01.95 : ISO 4113 Test oil

Combination No. : 0401840771

Injection pump

Pump designation : PE12P12OA52O/4LS3854

EP type number : 0411820728

Governor

Governer design. : RQ950PA664-3 Governer no. : 0421801629

Cust. part No. :

Customer—spec. information

Customer : MAN : D2842LE Motor

Power KW : 443.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

: 1688901019 assembly

Opening pressure

Tolerance bar

: 1680750075 Test lines

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

4.25 Prestroke mm : +- 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm : Tolerance mm

: 12- 1- 5- 9- 8 : - 3- 4- 11- 10 : - 2- 6- 7 Firing order

: 0-45-60-105-120 Phasing

: -165-180-225-240 : -285-300-345

Tolerance : + - 0.35

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 12

BASIC SETTING

700 Rated speed rpm

Rack travel in mm : 13.05

: +- 0.05Tolerance mm

Del. quantity cm3/1000 strokes : 251.0

Tolerance cm3/1000 strokes	: +- 1.0	Tolerance mm Rated speed rpm	: +- 0.50 : 1400
Check tolerance cm3/1000S.	: +- 4.0	LOW IDLE	
Spreed Tolerance cm3/1000 strokes	: 5.0	Testing: Rated speed rpm rack travel mm	
Check tolerance cm3/1000S.	: 9.0	Tolerance mm	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.		TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 13.05
Spreed Tolerance cm3/1000 strokes Check tolerance			
cm3/1000S.	: 12.0	BREAKAWAY	
Rated speed rpm	Y AT FULL LOAD STOP	Rack travel in make Rated speed rpm Tolerance 1/min	: 1025
Aneroid pressure hPa	: -	LOW IDLE	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 3.0 : + 6.0
RATED SPEED		Ī	
rack travel mm Rated speed rpm Tolerance 1/min	: 1025		
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1085 : ← 15	† †	
rack travel mm	: 0.50	Ţ	

		+ Outside diame
	TEST SPECIFICATIONS	x inside diam
Note remarks		x length mm
Refer to Service adjustment instru See microcard(s)		REMARKS
	: 19.01.95 : ISO 4113	(A) INJECTION
Combination No.	: 0401840777	Set equal del
Injection pump Pump designation EP type number	: -1	BEGINNING OF
Governor Governer design. Governer no.	: RQV250900PA1198 : 0421814117	Test pressure Tolerance ba
Cust. part No.		Prestroke mm Tolerance mm
cust. part 140.	•	test only
Customer—spec. in Customer Motor Power KW	iformation : DAEWOO : D2842LE : 440.0	Rack travel in Tolerance mm Firing order
TEST BENCH REQUIR	EMENTS	Ī
Test oil inlet		Phasing
temp. °C Tolerance °C	: 40 : +- 2.0	Tolerance Check tolerance °NW
Overflow valve	: 1417413025	+
Inlet press. bar	: 1.5	+ BEGINNING OF (
Test nozzle holde assembly	: 1688901105	Time to cyl. r
Opening pressure bar	: 208.5	BASIC SETTING
Tolerance bar	: +- 1.5	+ Rated speed rp
Lube oil	: 1409918004	Rack travel in Tolerance mm
Test lines	: 1680750089	+

```
eter : 8.0
meter: 3.0
: 600
N PUMP SETTING VALUES
livery quant.
DELIVERY
e bar : 31.0
ar : + 1.0
      : 4.25
: ← 0.05
      : +- 0.10
in mm : 10.50
: +- 1.50
      : 12- 1- 5- 9- 8
: - 3- 4- 11- 10
: - 2- 6- 7
     : 0-45-60-105-120
     : -165-180-225-240
: -285-300-345
      : + 0.30
w : ← 0.75
DELIVERY DIFFERENCE
no. : 12
rpm : 650
in mm: 11.40
      : ← 0.05
```

Del. quantity cm3/1000 strokes : 196.0	Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 10.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 83.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 10.0	control lever position degree : 118.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 6.90 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 25.0	rack travel mm : 10.40 Rated speed rpm : 945 Tolerance 1/min : +- 5
Tolerance + 3.0 + Check tolerance +	rack travel mm : 4.00 Rated speed rpm : 1055 Tolerance 1/min : +- 15
cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1150
cm3/1000s. : 12.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 65.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 30.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1060	Testing:
Rack travel in mm : 10.40 Tolerance mm : + 1.30	Rated speed rpm : 250 rack travel mm : 6.90 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 650	CRT mm min. : > 7.80
Aneroid pressure hPa : -	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 196.0 + Tolerance +	Rated speed rpm : 350
cm3/1000 strokes : + 1.0	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm	: 650 : 11.40 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.40 : + 0.10
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm	: > 80 : < 170
Check speed 1/min	: < 190
FUEL DELIVERY CHAI	RACTERISTICS
Aneroid pressure	: - : 900
Rated speed rpm Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: +- 6.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.40 : 945 : + 5
STARTING FUEL DELI	
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance	
cm3/1000s.	: ← 24.0
OW IDLE	
Rated speed rpm rack travel mm Folerance mm	: 250 : 6.90 : ← 0.30

Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.05.94 : ISO 4113 Test oil

Combination No. : 0401846926AA

Injection pump

Pump designation : PE6P110A720RS3040-2

EP type number : 0411816774

Governor

Governer design. : RQV200...1100PA555

: 0421813878 Governer no.

Cust. part No. :

Customer-spec. information Customer : SCANIA Motor : DS11

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Test nozzle holde

assembly : 1688901104

Opening pressure

bar Tolerance bar

Test lines : 1680750008

Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-

Prestroke mm : +- 0.05 Tolerance mm

: + 0.10test only

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30 Check

tolerance "NW

: + - 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 700

12.95 Rack travel in mm : : + - 0.05Tolerance mm

Del. quantity cm3/1000 strokes : 172.0	- Spreed - Tolerance - cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	- control lever - position degree : 61.0 - tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 12.0	- control lever - position degree : 116.0
2nd speed rpm : 250	tolerance degree : + 4.0
Rack travel in mm: 7.20 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 14.0	rack travel mm : 11.90 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Tolerance - cm3/1000 strokes : + 3.0 - Check tolerance -	- rack travel mm : 4.00 - Rated speed rpm : 1290 - Tolerance 1/min : +- 15
cm3/1000S. : \(\infty \) 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1400
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 69.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever position degree : 16.0 tolerance degree : + 4.0
control lever position degree : -1 Rated speed rpm : 1070	Testing:
Rack travel in mm: 16.50 Tolerance mm: + 1.30	Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	- Rated speed rpm : 150
Rated speed rpm : 700	- CRT mm min. : > 5.50
Aneroid pressure hPa : -	- CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 172.0 Tolerance	Rated speed rpm : 250
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	TORQUE CONTROL

rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.95 : ← 0.05 : 1000 : 12.95 : ← 0.05	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.95 : + 0.05	
MEASUREMENT		
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		
Rated speed rpm	: 500	
Pressure hPa Tolerance mm	: - 0.05	
Pressure hPa Tolerance mm	: + 0.10	
FUEL DELIVERY CHA	RACTERISTICS	
MICE OF THE PROBLEM C		
hPa Rated speed rpm	: - : 1000	
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1000 : 164.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes		
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 164.0	

BREAKAWAY

Rack travel in mm: 11.90
Rated speed rpm: 1145
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 265.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 250 7.20 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. : +--6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

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BOSCH INJ. PUMP T	TEST SPECIFICATIONS	Outside diameter : 6.0
Note remarks	†	x inside diameter : 2.0 x length mm : 600
Refer to Service adjustment instru See microcard(s)		
Edition Test oil	: 17.06.94	REMARKS
Test oil	: ISO 4113	Check and set without ROBO diaphragam
Combination No.	: 0401846987	
Injection pump Pump designation EP type number	: PE6P110A720RS3289-1 : 0411816795	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Governor Governer design.	: RO750PA1153-1	
Governer no.	: 0421801725	BEGINNING OF DELIVERY
Cust. part No.	: 1363596	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Customer—spec. in	: SCANIA +	Prestroke mm : 3.35 Tolerance mm : + 0.05
Motor	: DS1193A	test only : \leftarrow 0.10
TEST BENCH REQUIR	EMENTS +	Rack travel in mm : 10.50 Tolerance mm : +- 1.50
Test oil inlet temp. °C Tolerance °C	: + 40 : + 2.0	Firing order : 1-5-3-6-2- : 4
Overflow valve	: 1417413025	Phasing : 0-60-120-180-240 : -300
SVETTECH VALVE	1 1111113003	Tolerance : +- 0.30 Check
Inlet press. bar Tolerance bar		tolerance °NW : +- 0.75
Tolerance l/h	: + 10.0	BEGINNING OF DELIVERY DIFFERENCE
Test nozzle holde assembly	: 1688901104	Time to cyl. no. : 1
Opening pressure bar Tolerance bar	: 251.5 : + 1.5	BASIC SETTING
Lube oil	: 1409918004	Rated speed rpm : 700
Test lines	: 1680750008	Rack travel in mm : 12.35 Tolerance mm : +- 0.05

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	į.	Check tolerance	
Del. quantity cm3/1000 strokes	: 172.0	cm3/1000s. : +- Spreed	4.0
Tolerance cm3/1000 strokes	: + 1.0	Tolerance cm3/1000 strokes : Check tolerance	
Check tolerance cm3/1000s.	: + 4.0	cm3/1000S. :	12.0
Spreed		RATED SPEED	
Tolerance cm3/1000 strokes	: 8.0	control lever position degree :	36 D
Check tolerance cm3/1000s.	: 12.0	tolerance degree : +-	
(B) SETTING OF IN	JECTION PUMP	control lever position degree : tolerance degree : +-	
GUIDE SLEEVE TRAV	EL +	TORQUE CONTROL	
Rated speed rpm guide sleeve travel mm	: 759	Rated speed rpm : 7 rack travel mm : 1 Tolerance mm : +-	200 2.35
Tolerance mm	: + 0.10	Tolerance mm : +-	u.uɔ
Rated speed rpm guide sleeve travel mm	: 520 : -5.40	ANEROID/ALTITUDE COMPENSATOR TEST	
Tolerance mm	: + 0.10	CETTAIC	
Rated speed rpm	: 850	SETTING	
guide sleeve travel mm	: 17.21	Rated speed rpm : 5 Pressure hPa : 15	00 00
Tolerance mm	: + 0.10	rack travel mm : 1 Tolerance mm : +-	2.35
Rated speed rpm	: 793		0.05
guide sleeve travel mm	: 10.00	MEASUREMENT	
Tolerance mm	: + 0.10	Pressure hPa : : : : : : : : : : : : : : : : : : :	00
Rated speed rpm guide sleeve	+	rack travel mm : 1 Tolerance mm : +-	0.00
travet mm Tolerance mm	: 11.50 : + 0.50	Rated speed rpm : 5	00
	Y AT FULL LOAD STOP	Pressure hPa : 2 rack travel mm : 1 Tolerance mm : +-	1.75
Rated speed rpm Aneroid pressure	+	Pressure hPa : 1	40
hPa Del. quantity cm3/1000 strokes	: 1500	Pressure hPa : 1 rack travel mm : 1 Tolerance mm : +-	0.80 0.15
Tolerance	+		
cm3/1000 strokes	. — 1.0	FUEL DELIVERY CHARACTERI	STICS

Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 Aneroid pressure hPa Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000S. 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 265.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 04.01.95 : ISO 4113 Test oil Combination No. : 0402046856 Injection pump Pump designation : PE6P110A320RS3329Z EP type number : 0412016744 Governor Governer design. : RQV325...1300PA1119 : 0421814083 Governer no. Cust. part No. : 1284417/3 Customer—spec. information Customer : DAF : NS133M Motor Power KW : 133.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413025 Inlet press. bar Tolerance bar : + - 0.1Test nozzle holde assembly : 1688901101 Opening pressure 208.5 Tolerance bar 1.5 Test lines : 1680750008

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x inside diameter :
                        2.0
x length mm :
REMARKS
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values
BEGINNING OF DELIVERY
Test pressure bar :
                       31.0
Tolerance bar
                        1.0
Prestroke mm
                       4.85
                 : +- 0.05
Tolerance mm
test only
                 : +- 0.10
Rack travel in mm : 20.50
                : ÷ 0.50
Tolerance mm
Firing order
                 : 1-5-3-6-2-
Phasing
                 : 0-60-120-180-240
                 : -300
Tolerance
                 : +- 0.30
Check
tolerance "NW
                 : +- 0.75
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
Rated speed rpm
                    1000
Rack travel in mm :
                    11.85
Tolerance mm
                 : + - 0.05
Del. quantity
cm3/1000 strokes :
                     146.0
```

Outside diameter :

6.0

Tolerance cm3/1000 strokes	: ← 1.0	Rated speed rpm : 530 guide sleeve
Check tolerance cm3/1000s.	: +- 4.0	travel mm : 2.93 Tolerance mm : +- 0.25
Spreed Tolerance cm3/1000 strokes	: 4.0	Rated speed rpm : 1640 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: 7.5	
2nd speed rpm	: 325	GUIDE SLEEVE POSITION
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: ← 0.10	control lever position degree : - 1 Rated speed rpm : 1450 Rack travel in mm : 10.80
cm3/1000 strokes Check tolerance	: +- 2.5	Tolerance mm : + 1.30
cm3/1000s. Spreed Tolerance	: ← 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: 12.0	Rated speed rpm : 1000 Aneroid pressure
cm3/1000s.	: 15.0	+ hPa : 1000 + Del. quantity + cm3/1000 strokes : 146.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVE	EL	Check tolerance cm3/1000s. : +- 4.0 Spreed
Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15	Tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000S. : 7.5
Rated speed rpm guide sleeve	: 1353	RATED SPEED
travel mm Tolerance mm	: 8.29 : + 0.20	control lever position degree : 122.0
Rated speed rpm guide sleeve	: 900	tolerance degree : +- 4.0
travel mm Tolerance mm	: 4.92 : + 0.25	rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5
Rated speed rpm guide sleeve travel mm	: 405 : 2.07	rack travel mm : 4.00 Rated speed rpm : 1460
Tolerance mm	: +- 0.25	Tolerance 1/min : +- 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 455 : 2.52 : +- 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600

LOW IDLE		+ Pressure hPa : 310 + rack travel mm : 10.55 + Tolerance mm : + 0.05
control lever position degree tolerance degree	: 83.0 : +- 4.0	Pressure hPa : 130 - rack travel mm : 7.85 - Tolerance mm : + 0.10
Testing:		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm		Aneroid pressure hPa : 1000 Rated speed rpm : 700 Del. quantity
CRT mm min.	: > 6.00	- cm3/1000 strokes : 145.0 - Tolerance - cm3/1000 strokes : +- 2.0
CONTINUOUS-ACTION	N CONTROL	Check tolerance cm3/1000s. : +- 5.0
Rated speed rpm	: 375	Aneroid pressure hPa : - Rated speed rpm : 600
TORQUE CONTROL		+ Rated speed rpm : 600 + Del. quantity + cm3/1000 strokes : 88.0
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.85 : +- 0.05	Tolerance : + 1.0 Check tolerance : + 3.5
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : +- 0.05	BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.85 : + 0.05	Rack travel in mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5
ANEROID/ALTITUDE COMPENSATOR TEST		+
SETTING		LOW IDLE
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 11.85 : + 0.05	Rated speed rpm : 325 rack travel mm : 5.20 Tolerance mm : +- 0.10 Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 26.0 + Tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - 600 : 6.60 : + 0.20	- cm3/1000 strokes : +- 2.5 - Check tolerance - cm3/1000s. : +- 5.0 - Spreed
Rated speed rpm	: 600	Tolerance cm3/1000 strokes : 12.0

Check tolerance cm3/1000s.

15.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 04.07.94 : ISO 4113 Test oil Combination No. : 0402646604 Injection pump Pump designation : PE6P120A720RS7188 : -10 EP type number : 0412626924 Governor : RQV350...1050PA795 Governer design. : -13 : 0421814017 Governer no. : 1337549 Cust. part No. Customer-spec. information : SCANIA Customer : DS11 Allvary Motor TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar Tolerance bar Test nozzle holde : 1688901104 assembly Opening pressure

: 1680750008

6.0

```
x inside diameter :
                        2.0
x length mm :
REMARKS
 Check and set without ROBO diaphragam
(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values ____
BEGINNING OF DELIVERY
Test pressure bar :
Tolerance bar
Prestroke mm
                       4.45
Tolerance mm
                 : +- 0.10
test only
Rack travel in mm: 10.50
Tolerance mm : \leftarrow 1.50
                 : 1-5-3-6-2-
Firing order
                 : 0-60-120-180-240
Phasing
                 : -300
Tolerance
                 : +- 0.30
Check
                 : ← 0.75
tolerance °NW
BEGINNING OF DELIVERY DIFFERENCE
Time to cyl. no. :
BASIC SETTING
                      700
Rated speed rpm
Rack travel in mm :
                 : +- 0.05
Tolerance mm
```

Tolerance bar

Outside diameter :

Test lines

Del. quantity cm3/1000 strokes : 236.0	+ Spreed + Tolerance + cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 45.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 102.0
2nd speed rpm : 350	tolerance degree : +- 4.0
Rack travel in mm: 4.70 Tolerance mm: + 0.30 Del. quantity	rack travel mm : 12.30 Rated speed rpm : 1095 Tolerance 1/min : +- 5
cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +- 3.0	rack travel mm : 4.00 Rated speed rpm : 1230
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance	Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
cm3/1000 strokes : 4.0 Check tolerance	Rated speed rpm : 1350
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 72.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 15.0 tolerance degree : +- 4.0
control lever position degree : - 1 Rated speed rpm : 1280	Testing:
Rack travel in mm : 12.00 Tolerance mm : + 1.00	Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250
Rated speed rpm : 700	CRT mm min. : > 8.00
Aneroid pressure hPa : -	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 236.0 Tolerance	Rated speed rpm : 300
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	TORQUE CONTROL.
(iii)/ 10003 4.0	T

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Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.35	‡		
Tolerance mm	: +- 0.05	‡	BREAKAWAY	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.35 : ← 0.05		Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.30 : 1095 : + 5
ANEROID/ALTITUDE COMPENSATOR TEST		+		
		‡	STARTING FUEL DEL	IVERY
SETTING		‡	Rated speed rpm rack travel mm Tolerance mm	: 100 : 10.40
Rated speed rpm Pressure hPa	: 1500	+	Tolerance mm Del. quantity	: +- 0.20
rack travel mm Tolerance mm	: 13.35	‡	cm3/1000 strokes Tolerance	: 170.0
MEASUREMENT		<u> </u>	cm3/1000 strokes Check tolerance	: +- 20.0
Pressure hPa		1	cm3/1000s.	: + 24.0
Rated speed rpm		Ŧ		
rack travel mm Tolerance mm		Ŧ	LAL TALE	
Rated speed rpm	: 500	Ŧ	LOW IDLE	750
Pressure hPa	: 440_	‡	Rated speed rpm rack travel mm	: 4.70
rack travel mm Tolerance mm		‡	Tolerance mm Del. quantity	
Pressure hPa	: 270	‡	cm3/1000 strokes Tolerance	: 19.0
rack travel mm Tolerance mm	11.00 + 0.15	‡	cm3/1000 strokes Check tolerance	: + 3.0
		İ	cm3/1000s. Spreed	: ← 6.0
FUEL DELIVERY CHA	NDACTEDISTICS		Tolerance cm3/1000 strokes	: 4.0
	MACIENISIICS	Ŧ	Check tolerance	
Aneroid pressure	:	Ŧ	cm3/1000s.	: 8.0
Rated speed rpm Del. quantity		‡		
cm3/1000 strokes Tolerance	: 215.0	‡		
cm3/1000 strokes Check tolerance	: + 4.0	1		
cm3/1000s.	: ← 6.0	<u>‡</u>		
Aneroid pressure		<u>‡</u>		
Rated speed rpm Del. quantity	500	+		
cm3/1000 strokes	: 153.0	Ŧ		
Tolerance cm3/1000 strokes Check tolerance	: + 1.0	‡		
cm3/1000s.	: +- 4.0	Ŧ		

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 04.07.94 Edition : ISO 4113 Test oil : 0402646609 Combination No. Injection pump Pump designation : PE6P120A720RS7188 : -10 : 0412626924 EP type number Governor Governer design. : RQV200...950PA725 : -11 : 0421814033 Governer no. Cust. part No. : 1340418 Customer-spec. information Customer : SCANIA : DSC 11 36 Motor TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C Overflow valve : 1417413025 Inlet press. bar : Tolerance bar Overflow quantity min. L/h Tolerance 1/h : + 20.0Test nozzle holde : 1688901104 assembly Opening pressure Tolerance bar

Test Lines : 1680750008 Outside diameter : 6.0 2.0 x inside diameter : 600 x length mm : REMARKS Check and set without ROBO diaphragam (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : +-Prestroke mm 4.45 : +- 0.05 Tolerance mm : + 0.10test only Rack travel in mm: 10.50 : +- 1.50 Tolerance mm Firing order : 1-5-3-6-2-Phasing : 0-60-120-180-240 : -300 Tolerance : + - 0.30Check tolerance °NW : + - 0.75BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : BASIC SETTING Rated speed rpm 700

Rack travel in mm : 13.85 Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0
Del. quantity cm3/1000 strokes : 252.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000S. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 62.0 tolerance degree : +- 4.0
Check tolerance cm3/1000S. : 12.0	control lever position degree : 116.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 4.70 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 17.0	rack travel mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : +- 5
Tolerance + 3.0 + Check tolerance +	rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 64.0 tolerance degree : 4.0
GUIDE SLEEVE POSITION	control lever position degree : 10.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1150	Testing:
Rack travel in mm: 9.50 Tolerance mm: + 2.50	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : +- 0.10
THE LOAD DELIMENT AT SHELL LOAD STOP	Rated speed rpm : 150
PULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	CRT mm min. : > 6.00
Aneroid pressure hPa : -	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 252.0	Rated speed rpm : 270

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TORQUE CONTROL		Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rom	: 700	Check tolerance cm3/1000s. : +- 4.0
ack travel mm olerance mm	: 13.85 : +- 0.05	BREAKAWAY
ated speed rpm ack travel mm olerance mm	: 950 : 13.85 : + 0.05	Rack travel in mm : 12.80 Rated speed rpm : 995 Tolerance 1/min : + 5
NEROID/ALTITUDE OMPENSATOR TEST		CTARTAIC SUEL ACI THEOV
ETTING		STARTING FUEL DELIVERY Rated speed rpm : 100
Pated speed rpm Pressure hPa Pack travel mm Folerance mm	: 500 : 1500 : 13.85 : + 0.05	rack travel mm : 9.30 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 125.0 Tolerance
MEASUREMENT		+ cm3/1000 strokes : + 20.0 + Check tolerance + cm3/1000s. : + 24.0
Pressure hPa Hated speed rpm Hack travel mm Holerance mm	: 9.30	- CM3/ 10005. : 7- 24.0
ated speed rpm		LOW IDLE
ressure hPa ack travel mm olerance mm	: 375 : 12.05	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.30 bel. quantity cm3/1000 strokes : 17.0
ressure hPa ack travel mm olerance mm	: 185 : 11.00 : ← 0.15	Tolerance : + 3.0 - Check tolerance
		+ cm3/1000S. : + 6.0 + Spreed
JEL DELIVERY CHA	RACTERISTICS	Tolerance cm3/1000 strokes : 4.0 Check tolerance
neroid pressure	: -	cm3/1000s. : 8.0
ted speed rpm L. quantity	950	‡
3/1000 strokes lerance		‡
i3/1000 strokes neck tolerance n3/1000s.	: + 4.0 : + 6.0	<u>‡</u>
neroid pressure	0.0	<u> </u>
Pa ated speed rpm	: - : 500	$\frac{1}{2}$
el. quantity		<u> </u>

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BOSCH INJ. PUMP 1	TEST SPECIFICATIONS	Test lines : 1680750075
Note remarks	Ŧ	Outside diameter : 8.0
Refer to Service adjustment instru See microcard(s)	Info for test and uctions.	x inside diameter : 3.0 x length mm : 1000
Edition Test oil	: 19.01.95 : ISO 4113	REMARKS
Combination No.	: 0402646748	
Injection pump Pump designation	: PE6P120A320LS7834 : -10	
EP type number		(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Governor design.	: R9300/1050PA1030-27	per values
Governer no.	: 0421801777	BEGINNING OF DELIVERY
Cust. part No.	: 0260744202	Test pressure bar : 31.0 Tolerance bar : + 1.0
Customer spec. in Customer Motor Power KW	iformation : MB-NFZ : OM441 LA : 230.0	Prestroke mm : 5.25 Tolerance mm : + 0.05 test only : + 0.10
TEST BENCH REQUIR		Rack travel in mm : 20.50 Tolerance mm : + 0.50
Test oil inlet temp. °C Tolerance °C	: 40 : + 2.0	Firing order : 6-3-5-2-4- : 1-
Overflow valve	: 1417413047	Phasing : 0-60-120-180-240 : -300-360 Tolerance : +- 0.30
Inlet press. bar Tolerance bar	: 1.5 : + 0.1	Check tolerance °NW : +- 0.75
Tolerance l/h	: + 10.0	BEGINNING OF DELIVERY DIFFERENCE
Test nozzle holde assembly	: 1688901105	Time to cyl. no. : 6
Omening pressure	: 208.5	BASIC SETTING
Tolerance bar	: + 1.5	Rated speed rpm : 550
Lube oil	: 1409918004	

Dook trough in any 11 00	+ guide sleeve
Rack travel in mm : 14.80 Tolerance mm : +- 0.05	† travel mm : 6.09 † Tolerance mm : +- 0.10
Total drive likit . +- U.U.	Tolerance mm : +- 0.10
Del. quantity	Rated speed rpm : 421
cm3/1000 strokes : 230.0	+ guide sleeve
	+ travel mm : 4.03
Tolerance	+ Tolerance mm : + 0.10
cm3/1000 strokes : +- 1.0	+
Charle Antonna	Rated speed rpm : 550
Check tolerance cm3/1000S. : +- 4.0	guide sleeve
CIID/10003 +- 4.0	travel mm : 6.00 Tolerance mm : + 0.10
Spreed	T Total ance that . T 0.10
Tolerance	Rated speed rpm : 1270
cm3/1000 strokes : 5.0	+ guide sleeve
	† travel mm : 11.50
Check tolerance	+ Tolerance mm : + 0.50
cm3/1000s. : 9.0	207
2nd speed rpm : 300	Rated speed rpm : 893
2nd speed rpm : 300	guide sleeve travel mm : 6.26
Rack travel in mm : 6.30	Tolerance mm : + 0.10
Tolerance mm : + 0.30	Total arise tial
Del. quantity	
cm3/1000 strokes : 13.0	+ GUIDE SLEEVE POSITION
Tolerance	+
cm3/1000 strokes : + 3.0	+ Rated speed rpm : 600
Check tolerance cm3/1000s. : +- 6.0	Book brown in many 20,000
cm3/1000s. : +- 6.0	→ Rack travel in mm : 20.00
· · · · · · · · · · · · · · · · · · ·	
Spreed	Tolerance mm : + 0.80
Spreed Tolerance	
Spreed ToLerance cm3/1000 strokes : 6.0	Tolerance mm : + 0.80
Spreed Tolerance	
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000s.: 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 300 guide sleeve travel mm: 1.82 Tolerance mm: + 0.10 Rated speed rpm: 1104 guide sleeve travel mm: 6.68 Tolerance mm: + 0.10	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.35	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 99.0
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000s.: 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 300 guide sleeve travel mm: 1.82 Tolerance mm: + 0.10 Rated speed rpm: 104 guide sleeve travel mm: 6.68 Tolerance mm: + 0.10 Rated speed rpm: 1050 guide sleeve travel mm: 6.35 Tolerance mm: + 0.10	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 99.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.82 Tolerance mm : + 0.10 Rated speed rpm : 1104 guide sleeve travel mm : 6.68 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.35 Tolerance mm : + 0.10	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 99.0

Tolerance 1/min	: +- 8	1	Tolerance mm	: +- 0.15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1200	+	Rated speed rpm	: 400
		+	Pressure hPa rack travel mm	: 13.35
rack travel mm Tolerance mm Rated speed rpm		+	Tolerance mm	
Rated speed rpm	: 1300		Pressure hPa rack travel mm Tolerance mm	: 540 : 14.20 : +- 0.20
LOW IDLE				. , 0.20
control lever		‡	START CUT-OUT	
position degree tolerance degree	: 72.0 : ← 4.0	‡	Rated speed rpm Check	
Testing:		‡	speed 1/min Rated speed rpm Check	: > 80 : < 220
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.20 : + 0.10	1	speed 1/min	: < 240
		Ŧ	FUEL DELIVERY CH	ARACTERISTICS
rack travel mm Rated speed rpm	: 2.00 : 405	1	Aneroid pressure	
Tolerance 1/min	: ← 20	Į	hPa	: 1000
Rated speed rpm	: 200	‡	Rated speed rpm Del. quantity	
CRT mm min.	: > 6.80	‡	cm3/1000 strokes Tolerance cm3/1000 strokes	
TORQUE CONTROL		I	Check tolerance cm3/1000s.	
	. cro	+	Spreed	
Rated speed rpm rack travel mm	: 550 : 14.80	İ	Tolerance cm3/1000 strokes	: 8.0
rack travel mm Tolerance mm	: ← 0.05	+	Check tolerance cm3/1000s.	: 12.0
Rated speed rpm rack travel mm		‡	Aneroid pressure	v the the
Tolerance mm	: + 0.10	‡	hPa Rated speed rpm	: – : 500
ANEDOTO (AL TITULOS		+	Del. quantity	
ANEROID/ALTITUDE COMPENSATOR TEST		Ŧ	cm3/1000 strokes Tolerance	
		1	cm3/1000 strokes Check tolerance	: +- 1.0
SETTING		-	cm3/1000s. Spreed	: +- 4.0
Rated speed rpm Pressure hPa	: 1000	‡	Tolerance cm3/1000 strokes	: 8.0
rack travel mm Tolerance mm	: 14.80 : +- 0.05	‡	Check tolerance cm3/1000s.	: 12.0
MEASUREMENT		‡	BREAKAWAY	
Pressure hPa	: -	Ŧ	DUCHUMANI	
Rated speed rpm rack travel mm		‡	Rack travel in mm	13.80

MO1

Rated speed rpm : 1098 Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes

Check tolerance cm3/1000s.

: +- 19.0

LOW IDLE

Rated speed rpm 300 rack travel mm 6.30 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance cm3/1000 strokes :

6.0

Check tolerance

cm3/1000s. 10.0

BOSCH INJ. PUMP T	TEST SPECIFICATIONS	Test lines : 1680750075
Note remarks	Ŧ	Outside diameter : 8.0
Refer to Service adjustment instru See microcard(s)	Info for test and uctions. W400/	x inside diameter : 3.0 x length mm : 1000
Edition Test oil	: 19.01.95 : ISO 4113	REMARKS
Combination No.	: 0402646749	
Injection pump Pump designation EP type number	: PE6P120A320LS7837 : -10 : 0412626855	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.
Governor Governer design	: RQ300/1050PA993-13	per values
Governer no.		BEGINNING OF DELIVERY
Cust. part No.	: 0260744002	Test pressure bar : 31.0 Tolerance bar : +- 1.0
Customer-spec. in Customer Motor Power KW	: MB-NFZ	Prestroke mm : 5.25 Tolerance mm : + 0.05 test only : + 0.10 Rack travel in mm : 20.50
TEST BENCH REQUIR	EMENTS	Tolerance mm : ← 0.50 Firing order : 6- 3- 5- 2-
Test oil inlet temp. °C Tolerance °C		: 1- Phasing : 0-60-120-180-24
Overflow valve	: 1417413047	: -300-360 Tolerance : + 0.30 Check
Inlet press. bar Tolerance bar	: 1.5 : + 0.1	tolerance °NW : +- 0.75
Tolerance l/h	: + 10.0	BEGINNING OF DELIVERY DIFFERENCE
Fest nozzle holde assembly	: 1688901105	Time to cyl. no. : 6
Opening pressure	: 208.5	BASIC SETTING
Tolerance bar	: + 1.5	Rated speed rpm : 550
Lube oil	: 1409918004	Rack travel in mm : 15.10

MO3

Tolonopee mm	0 05	1
Tolerance mm	: +- 0.05	Rated speed rpm : 510
Del. quantity	252.0	+ guide sleeve
cm3/1000 strokes	s : 252.0	travel mm : 6.00
Tolerance		+
cm3/1000 strokes	s : + 1.0	+ Rated speed rpm : 1280
Check tolerance		f guide sleeve travel mm : 11.50
cm3/1000s.	: +- 4.0	+ Tolerance mm : + 0.50
Spreed		†
Tolerance		T GUIDE SLEEVE POSITION
cm3/1000 strokes	5 : 5.0	+
Check tolerance		Rated speed rpm : 600
cm3/1000s.	: 9.0	Rack travel in mm: 20.00
		+ Tolerance mm : + 0.80
2nd speed rpm	: 300	<u> </u>
Rack travel in m	nm: 6.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm	: +- 0.30	+
Del. quantity cm3/1000 strokes	: 19.0	+ Rated speed rpm : 550 + Aneroid pressure
Tolerance	, , , , , , , , , , , , , , , , , , , ,	+ hPa : 1100
cm3/1000 strokes	s : ← 3.0	+ Del. quantity
Check tolerance cm3/1000s.	: + 6.0	+ cm3/1000 strokes : 252.0 + Tolerance
Spreed	0.0	cm3/1000 strokes : + 1.0
Tolerance		+ Check tolerance
cm3/1000 strokes Check tolerance	6.0	+ cm3/1000S. : + 4.0 + Spreed
cm3/1000S.	: 10.0	Tolerance
		+ cm3/1000 strokes : 5.0
(B) SETTING OF I	NJECTION PUMP	+ Check tolerance + cm3/1000s. : 9.0
WITH GOVERNOR		+
		DATEN COFFN
GUIDE SLEEVE TRA	VEL	RATED SPEED
		+
Rated speed rpm guide sleeve	: 300	control lever position degree : 100.0
travel mm	: 1.85	tolerance degree : +- 4.0
Tolerance mm	: + 0.10	+
Pated speed spee	: 1104	+ rack travel mm : 14.10 + Rated speed rpm : 1098
Rated speed rpm guide sleeve	. [104	+ Rated speed rpm : 1098 + Tolerance 1/min : +- 8
travel mm	: 6.34	+
Tolerance mm	: +- 0.10	+ rack travel mm : 4.00 + Rated speed rpm : 1200
Rated speed rpm	: 1050	Tolerance 1/min : + 15
guide sleeve	-	<u> </u>
travel mm Tolerance mm	: 6.00 - : + 0.10 -	+ rack travel mm : 0.75 + Tolerance mm : + 0.75
FOCULATIVE IIRI)		Rated speed rpm : 1300
Rated speed rpm	: 413	+
guide sleeve travel mm	: 4.55 -	+ LOW IDLE
Tolerance mm	: + 0.10	- COM TATE
		•

MO4

		+
control lever position degree tolerance degree	: 73.0 : +- 4.0	START CUT-OUT
Testing:		+ Rated speed rpm : > 100 + Check
Dated aread was	. 700	+ speed 1/min : > 80
Rated speed rpm	: 5.50	Rated speed rpm : < 220 Check
rack travel mm Tolerance mm	: ← 0.10	speed 1/min : < 240
rack travel mm	: 2.00	
rack travel mm Rated speed rpm Tolerance 1/min	: 400 : +- 20	FUEL DELIVERY CHARACTERISTICS
TOTAL AND THE		Aneroid pressure
Rated speed rpm	: 200	hPa : 1100 Rated speed rpm : 1050
ADT	> 0.40	Rated speed rpm : 1050
CRT mm min.	: > 8.10	Del. quantity + cm3/1000 strokes : 240.0
		Tolerance
TORQUE CONTROL		+ cm3/1000 strokes : +- 3.0
		+ Check tolerance
Rated speed rpm	: 550 : 15.10	+ cm3/1000s. : $+$ 6.0
rack travel mm Tolerance mm	: 15.10	+ Spreed
Tolerance mm	: +- 0.05	+ Tolerance
Pated speed rom	. 1050	- cm3/1000 strokes : 8.0 - Check tolerance
Rated speed rpm rack travel mm	15.10	- cm3/1000s. : 12.0
Tolerance mm	: + 0.10	1 12.0
		+ Aneroid pressure
ANEROID/ALTITUDE		Rated speed rpm : 500
COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 135.0
		+ Tolerance
SETTING		= cm3/1000 strokes : +- 1.0
		+ Check tolerance
Rated speed rpm	: 400	+ cm3/1000s. : +- 4.0
Pressure hPa rack travel mm	: 1100	+ Spreed
	: 15.10	† Tolerance
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 8.0 + Check tolerance
MEASUREMENT		+ cm3/1000s. : 12.0
11210011212141		12.5
Pressure hPa	: -	
Rated speed rpm		+ BREAKAWAY
rack travel mm		
Tolerance mm	: ← 0.20	Rack travel in mm: 14.10
Rated speed rpm	: 400	Rated speed rpm : 1098
opeom i bill	. 100	+ Tolerance 1/min : + 8
Pressure hPa	: 150	
rack travel mm	: 10.05	+
Tolerance mm	: ← 0.20	CTARTIN CHEL ACITHCH
Pressure hPa	: 550	STARTING FUEL DELIVERY
rack travel mm	: 13.85	Rated speed rpm : 100
Tolerance mm	: +- 0.20	Del. quantity
		- cm3/1000 strokes : 265.0
		T .

Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 300 6.20 rack travel mm Tolerance mm : + 0.30Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

BOSCH INJ. PUMP 1	TEST SPECIFICATIONS	Outside diameter : 8.0
Note remarks		x inside diameter: 3.0
Refer to Service adjustment instru See microcard(s)	Info for test and uctions. W400/	x length mm : 1000
Edition Test oil	: 23.01.95 : ISO 4113	REMARKS
Combination No.	: 0402646750	‡
injection pump Pump designation IP type number	: PE6P120A320LS7836 : -10 : 0412626854	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Governor Governer design. Governer no.	: RQ300/1050PA1031-21 : 0421801772	BEGINNING OF DELIVERY
ust, part No.		Test pressure bar : 31.0 Tolerance bar : +- 1.0
		Prestroke mm : 5.55 Tolerance mm : + 0.05
ust <mark>omer</mark> -spec. in ustomer otor	: MB-NFZ	test only : + 0.10
ower KW		Rack travel in mm : 20.50 Tolerance mm : + 0.50
EST BENCH REQUIR	EMENTS	Firing order : 6-3-5-2- : 1-
Test oil inlet Temp. °C Tolerance °C	: 40 : +- 2.0	Phasing : 0-60-120-180-2
oterance t	: +- 2.0	: -300-360 Tolerance : +- 0.30
verflow valve	: 1417413047	r Check tolerance °NW : + 0.75
nlet press. bar olerance bar	: 1.5 : + 0.1	BEGINNING OF DELIVERY DIFFERENCE
olerance l/h	: +- 10.0	T
est nozzle holde ssembly	: 1688901105	Time to cyl. no. : 6
pening pressure		BASIC SETTING
ar olerance bar	: 208.5 : + 1.5	Rated speed rpm : 1050
est lines	: 1680750075 -	Rack travel in mm : 13.00 Tolerance mm : +- 0.05

1	Talanana
Del. quantity cm3/1000 strokes : 190.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance	cm3/1000s. : 9.0
cm3/1000 strokes : + 1.0	RATED SPEED
Check tolerance cm3/1000S. : + 4.0	control lever
Spreed Tolerance cm3/1000 strokes : 5.0	position degree : 96.0 tolerance degree : +- 4.0 rack travel mm : 12.00
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1098 Tolerance 1/min : +- 8
2nd speed rpm : 300	rack travel mm : 4.00 Rated speed rpm : 1190
Rack travel in mm: 5.80 † Tolerance mm: +- 0.30	Tolerance 1/min : + 15
Del. quantity cm3/1000 strokes : 19.0	rack travel mm : 0.75 Tolerance mm : + 0.75
Tolerance cm3/1000 strokes : + 3.0	Rated speed rpm : 1300
Check tolerance cm3/1000s. : + 6.0 Spreed	LOW IDLE
Tolerance cm3/1000 strokes : 6.0	control lever
Check tolerance cm3/1000s. : 10.0	position degree : 69.0 tolerance degree : + 4.0
(2) 2555112 25511 5111	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 300
	rack travel mm : 3.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 350
Rated speed rpm : 600	Tolerance 1/min : + 20
Rack travel in mm: 20.00 + Tolerance mm: + 0.80 +	Rated speed rpm : 200
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 5.10
+	TORQUE CONTROL
Rated speed rpm : 1050 + Aneroid pressure + B00 + B00	Rated speed rpm : 1050
Del. quantity cm3/1000 strokes : 190.0	rack travel mm : 13.00 Tolerance mm : +- 0.05
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 550 rack travel mm : 13.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : +- 4.0	Tolerance mm : + 0.10
Spreed 4.8	

Del. Quantity			+ Rated speed rpm : 500
## SETTING Rated speed rpm			1
Spreed Sppeed S			+ Check tolerance
Pressure hPa	SETTING		
BREAKAWAY Rated speed rpm 400 Rated speed rpm 10.55 Rated speed rpm 10.98 Tolerance mm + 0.15 Rated speed rpm 10.98 Tolerance 1/min + 8 Rated speed rpm 10.98 Tolerance 1/min + 8 Rated speed rpm 10.98 Tolerance 1/min + 8 Rated speed rpm 10.98 Tolerance 1/min + 8 Rated speed rpm 10.90 Tolerance mm + 0.20 Rated speed rpm 100 Del. quantity Check tolerance mm + 0.20 Tolerance mm + 0.20 Tolerance cm3/1000 strokes 210.0 Tolerance cm3/1000 strokes + 15.0 Check tolerance cm3/1000 strokes + 19.0 Tolerance mm 5.80 Rated speed rpm < 220 Check speed 1/min > 80 Rated speed rpm < 220 Check speed 1/min > 80 Rated speed rpm 5.80 Tolerance mm + 0.30 Del. quantity Cm3/1000 strokes 19.0 Tolerance cm3/1000 strokes 19.0 Tolerance cm3/1000 strokes 189.0 Check tolerance cm3/1000 strokes 189.0 Check tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000 st	Pressure hPa rack travel mm	: 800 : 13.00	cm3/1000 strokes : 8.0 Check tolerance
Pressure hPa : — Rated speed rpm : 400 rack travel mm : 10.55 Rated speed rpm : 400 Pressure hPa : 200 rack travel mm : 11.40 Tolerance mm : + 0.20 Pressure hPa : 200 Pressure hPa : 350 rack travel mm : 11.40 Tolerance mm : + 0.20 Pressure hPa : 350 rack travel mm : 12.25 Tolerance mm : + 0.20 Pressure hPa : 350 rack travel mm : 12.25 Tolerance mm : + 0.20 Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000 strokes : + 19.0 Tolerance mm : + 0.30 Pressure hPa : 80 Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.30 Pressure hPa : 800 Rated speed rpm : 500 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated sp	MEASUREMENT		DDEALAMAY
Rated speed rpm : 400 Pressure hPa : 200 rack travel mm : 11.40 Tolerance mm : + 0.20 Pressure hPa : 350 Pressure hPa : 350 Pressure hPa : 350 Tolerance mm : + 0.20 Rated speed rpm : 100 Del. quantity Check tolerance Cm3/1000 strokes : 210.0 Tolerance Cm3/1000 strokes : + 15.0 Check tolerance Cm3/1000 strokes : + 19.0 Rated speed rpm : > 100 Check Speed 1/min : > 80 Rated speed rpm : < 220 Check Speed 1/min : < 240 Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.30 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 550 Del. quantity Cm3/1000 strokes : 189.0 Tolerance Cm3/1000 strokes : + 3.0 Check tolerance Cm3/1000 strokes : 4.0 Check tolerance Cm3/1000 strokes : 6.0 Check tolerance Cm3/1000 strokes : 8.0 Check tolerance Cm3/1000 strokes :	Rated speed rpm rack travel mm	: 10.55	Rack travel in mm : 12.00 Rated speed rpm : 1098
Tack travel mm	Rated speed rpm	: 400	Toterance 1/min : +- 6
Pressure hPa : 350 rack travel mm : 12.25 Tolerance mm : + 0.20 START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min : < 240 Pressure hPa : 350 Rated speed rpm : < 220 Check speed 1/min : < 240 Rated speed rpm : 5.80 Tolerance mm : + 0.30 PuEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 550 Check speed rpm : 550 Check tolerance cm3/1000 strokes : 43.0 Check tolerance Cm3/1000 strokes : 189.0 Tolerance Cm3/1000 strokes : 45.0 Check tolerance Cm3/1000 strokes : 6.0 Check tolerance Cm3/1000 strokes : 6.0 Check tolerance Cm3/1000 strokes : 8.0 Check tolerance	rack travel mm	: 11.40	+
START CUT-OUT	rack travel mm	: 12.25	Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 15.0
Check speed 1/min :> 80 Rated speed rpm : < 220 Check speed 1/min :> 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : 40.0 Spreed Tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000s. : 12.0	START CUT-OUT		
speed 1/min : > 80 Rated speed rpm : < 220		: > 100	<u> </u>
Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.30	speed 1/min Rated speed rpm		LOW IDLE
FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 550 Del. quantity cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 6.0 Check tolerance cm3/1000 strokes : + 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure		: < 240	+ rack travel mm : 5.80
Aneroid pressure hPa : 800 Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Check tolerance cm3/1000 strokes : 40.0 Spreed Tolerance cm3/1000 strokes : 40.0 Spreed Tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance cm3/1000 strokes : 80.0 Check tolerance	FUEL DELIVERY CHA	ARACTERISTICS	+ Del. quantity
Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 10.0 Aneroid pressure	hPa		Tolerance cm3/1000 strokes : + 3.0
Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure	Del. quantity		+ cm3/1000s. : $+$ 6.0
Check tolerance cm3/1000S. : ← 6.0	Tolerance cm3/1000 strokes		+ Tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 Aneroid pressure	cm3/1000s.	: ← 6.0	
cm3/1000S. : 12.0 + Aneroid pressure	Tolerance cm3/1000 strokes	: 8.0	+
		: 12.0	†
		: -	‡

BUSCH INU. PUMP I	EST SPECIFICATIONS	+ Test lines : 1680750075
Note remarks		Outside diameter : 8.0
Refer to Service adjustment instru See microcard(s)		x inside diameter : 3.0 x length mm : 1000
Edition Test oil	: 23.01.95 : ISO 4113	REMARKS
ombination No.	: 0402646751	Ī
	: PE6P12OA32OLS7834 : −10	-
P type number overnor	: 0412626853	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
overner design. overner no.	: RQ300/1050PA1031-20 : 0421801774	
		BEGINNING OF DELIVERY
ust. part No.	: 0260743402	Test pressure bar : 31.0 Tolerance bar : +- 1.0
ustomer—spec. in ustomer otor		Prestroke mm : 5.55 Tolerance mm : + 0.05
ower KW	: 213.0	test only : + 0.10
EST BENCH REQUIRE	EMENTS	Rack travel in mm : 20.50 Tolerance mm : +- 0.50
est oil inlet emp. °C olerance °C	: 40 : +- 2.0	Firing order : 6-3-5-2-4- : 1
verflow valve	: 1417413047	Phasing : 0-60-120-180-240 : -300
	•	Tolerance : + 0.30 Check
llet press. bar Blerance bar	: 1.5 : + 0.1	tolerance °NW : +- 0.75
lerance l/h	: +- 10.0	BEGINNING OF DELIVERY DIFFERENCE
est nozzle holde sembly	: 1688901105	Time to cyl. no. : 6
ening pressure ir lerance bar	: 208.5 : +- 1.5	BASIC SETTING
ube oil	: 1409918004	Rated speed rpm : 1050

Rack travel in mr Tolerance mm	n: 14.20 : + 0.05	travel mm : 6.13 Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes	: 202.0	Rated speed rpm : 430 guide sleeve
Tolerance cm3/1000 strokes	: ← 1.0	travel mm : 4.39 Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 540 guide sleeve travel mm : 6.00
Spreed		Tolerance mm : + 0.10
Tolerance cm3/1000 strokes	: 5.0	Rated speed rpm : 1270 guide steeve
Check tolerance cm3/1000s.	: 9.0	travel mm : 11.50 Tolerance mm : +- 0.50
2nd speed rpm	: 300	+ Rated speed rpm : 829 + guide sleeve + travel mm : 6.38
Rack travel in mm Tolerance mm Del. quantity	7.00 : +- 0.30	Tolerance mm : +- 0.10
cm3/1000 strokes Tolerance	: 19.0	GUIDE SLEEVE POSITION
cm3/1000 strokes Check tolerance	: ← 3.0	Rated speed rpm : 600
cm3/1000s. Spreed Tolerance	: +- 6.0	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP
· · · · · · · · · · · · · · · · · · ·	. 10.0	Rated speed rpm : 1050 Aneroid pressure
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+ hPa : 800 + Del. quantity
		+ cm3/1000 strokes : 202.0 + Tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm guide sleeve	: 300	cm3/1000S. : +- 4.0 + Spreed
travel mm Tolerance mm	: 1.93 : ← 0.10	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm guide sleeve	: 1104	cm3/1000s. : 9.0
travel mm Tolerance mm	: 6.83 : + 0.10	RATED SPEED
Rated speed rpm guide sleeve	: 1050	control lever
travel mm Tolerance mm	: 6.50 : +- 0.10	position degree : 99.0 tolerance degree : + 4.0
Rated speed rpm	: 732	rack travel mm : 13.20 Rated speed rpm : 1098

Tolerance 1/min	: +- 8	† Tolerance mm : +- 0.15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 · 1190	Rated speed rpm : 400
Tolerance 1/min	: +- 15	Pressure hPa : 200
		Pressure hPa : 200 rack travel mm : 11.65 Tolerance mm : +- 0.20
rack travel mm		† Toterance mm : + 0.20
Tolerance mm Rated speed rpm	1300	Pressure hPa : 350
•		Pressure hPa : 350 rack travel mm : 13.10 Tolerance mm : + 0.20
LOW IDLE		Tolerance mm : + 0.20
CON IDEE		
control lever		+ START CUT-OUT
	: 73.0	Rated speed rpm : > 100
position degree tolerance degree	: +- 4.0	+ Check
		speed 1/min :> 80 Rated speed rpm : < 220
Testing:		+ Rated speed rpm : < 220
Rated speed rpm	• 300	+ Check + speed 1/min : < 240
rack travel mm	4.50	T Speed Milli 240
rack travel mm Tolerance mm	: +- 0.10	
		+ FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 2.00	Anancid massums
rack travel mm Rated speed rpm Tolerance 1/min	· + 20	+ Aneroid pressure + hPa : 800
rocci da loc i a litti		Rated speed rpm : 550
Rated speed rpm	: 200	+ Del. quantity
	4.45	+ cm3/1000 strokes : 197.0
CRT mm min.	: > 6.10	+ Tolerance
		- + cm3/1000 strokes : + 3.0 - + Check tolerance
TORQUE CONTROL		+ cm3/1000s. : +- 6.0
		Spreed
Rated speed rpm	: 1050	+ Tolerance
rack travel mm Tolerance mm	: 14.20 : ← 0.05	+ cm3/1000 strokes : 8.0
TOLET GITLE IIII	. די ט.ט	+ Check tolerance + cm3/1000s. : 12.0
Rated speed rpm	: 550	+ 10000
rack travel mm	: 14.20	Aneroid pressure
Tolerance mm	: + 0.10	hPa : -
		Rated speed rpm : 500 Del. quantity
ANEROID/ALTITUDE		cm3/1000 strokes : 127.0
COMPENSATOR TEST		+ Tolerance
		- cm3/1000 strokes : +- 1.0
CETTING		Check tolerance
SETTING		+ cm3/1000S. : + 4.0 + Spreed
Rated speed rpm	: 400	Tolerance
Pressure hPa	: 800	+ cm3/1000 strokes : 8.0
rack travel mm	: 14.20	+ Check tolerance
Tolerance mm	: ← 0.05	± cm3/1000s. : 12.0
MEASUREMENT		
		BREAKAWAY
Pressure hPa	: – : 400	†
Rated speed rpm rack travel mm	- <u>-</u>	Rack travel in mm : 13.20
u. wrant time		1 There is a to the terminal to the

Rated speed rpm : 1098 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : **←** 15.0

Check tolerance cm3/1000s.

Check tolerance cm3/1000S. : +- 19.0

LOW IDLE

Rated speed rpm 300 7.00 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0

10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 23.01.95 Test oil : ISO 4113 Combination No. : 0402646752 Injection pump Pump designation : PE6P12OA32OLS7836 : -10 : 0412626854 EP type number Governor Governer design. : RQ300/1050PA1030-26 Governer no. : 0421801775 Cust. part No. : 0260742602 Customer-spec, information Customer : MB-NFZ Motor : 0M401 LA Power KW : 180.0 TEST BENCH REQUIREMENTS Test oil inlet temp. °C Tolerance °C 2.0 Overflow valve : 1417413047 Inlet press. bar : Tolerance bar Tolerance l/h: \leftarrow 10.0 Test nozzle holde : 1688901105 assembly Opening pressure 208.5 bar : +- 1.5 Tolerance bar

: 1409918004

Test Lines : 1680750075 Outside diameter : 8.0 x inside diameter: x Length mm : 1000 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : + 1.0Prestroke mm 5.55 Tolerance mm test only : + 0.10Rack travel in mm: 20.50 Tolerance mm : +- 0.50 : 6-3-5-2-4-: 1-Firing order Phasing : 0-60-120-180-240 : -300-360 : + - 0.30Tolerance Check : +- 0.75 tolerance °NW BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 6 BASIC SETTING : 1050 Rated speed rpm

Lube oil

Rack travel in mm :		guide sleeve travel mm : 4.05
Tolerance mm :	+ 0.05	Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes :	173.0	Rated speed rpm : 550 guide sleeve
Tolerance		travel mm : 6.00 Tolerance mm : + 0.10
cm3/1000 strokes :	+ 1.0	Rated speed rpm : 1280
Check tolerance cm3/1000s. :	+ 4.0	guide sleeve travel mm : 11.50
Spreed		Tolerance mm : ← 0.50
Tolerance cm3/1000 strokes :	5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. :	9.0	Rated speed rpm : 600
2nd speed rpm :	300	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
Rack travel in mm :	5.80 I	
Tolerance mm :	← 0.30 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	10.0	Retail aread area . 1050
cm3/1000 strokes : Tolerance	19.0	Rated speed rpm : 1050 Aneroid pressure
	+ 3.0 +	hPa : 700
Check tolerance cm3/1000s. :	+ 6.0	Del. quantity cm3/1000 strokes : 173.0
Spreed:	T 0.5	cm3/1000 strokes : 173.0 Tolerance
Tolerance	+	cm3/1000 strokes : +- 1.0
cm3/1000 strokes :	6.0	Check tolerance
Check tolerance cm3/1000s.	10.0	cm3/1000S. : +- 4.0 Spreed
	1	Tolerance
(מ) ברדדונה מר זוווה	CTYON OWN	cm3/1000 strokes : 5.0
(B) SETTING OF INJE	CITON FOMP	Check tolerance cm3/1000s. : 9.0
	+	
GUIDE SLEEVE TRAVEL	Ī	RATED SPEED
Rated speed rpm :	300 +	
guide sleeve travel mm :	1.61	control lever position degree : 95.0
	+ 0.10 I	tolerance degree : +- 4.0
Rated speed rpm :	1103	rack travel mm : 11.40
guide sleeve	+	Rated speed rpm : 1098
travel mm : Tolerance mm :	6.37 + 0.10	Tolerance 1/min : +- 8
	+	rack travel mm : 4.00
Rated speed rpm : guide sleeve	1050	Rated speed rpm : 1180 Tolerance 1/min : +- 15
travel mm :	6.00	Total ance Training : The 13
	+ 0.10 +	rack travel mm : 0.75
Rated speed rpm :	431	Tolerance mm : + 0.75 Rated speed rpm : 1300
nacca specia (pii) .	Ţ	natea speed i piii . 1000
	•	

		+	rack travel mm	: 12.00
LOW IDLE		 ‡	Tolerance mm	: 0.20
control lever		Ŧ	START CUT-OUT	
position degree tolerance degree	: 72.0 : +- 4.0	Ī	Rated speed rpm Check	: > 100
Testing:		‡	speed 1/min Rated speed rpm	
Rated speed rpm rack travel mm Folerance mm	: 300 : 5.80 : + 0.10	Ī	Check speed 1/min	: < 240
		1	FUEL DELIVERY CHA	ARACTERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 415 : ← 20	Ŧ	Aneroid pressure	: 700 : 550
Rated speed rpm	: 200	‡	Rated speed rpm Del. quantity cm3/1000 strokes	: 550
RT mm min.	: > 7.40	‡	Tolerance	
ORQUE CONTROL	**************************************	 ‡	cm3/1000 strokes Check tolerance cm3/1000s.	
	: 1053	Ŧ	Spreed Tolerance	: 0.0
ated speed rpm ack travel mm olerance mm	: 12.40 : + 0.05	Ī	cm3/1000 strokes Check tolerance	
ated speed rpm		Ī	cm3/1000s.	
ack travel mm olerance mm	: 12.40	+	Aneroid pressure	: -
NEDOTA / AL TITLE		 ‡	Rated speed rpm Del. quantity	
NEROID/ALTITUDE OMPENSATOR TEST		‡	cm3/1000 strokes Tolerance	
ETTING		Ŧ	cm3/1000 strokes Check tolerance	
ETTING	. /00	‡	cm3/1000s. Spreed	: +- 4.0
ated speed rpm ressure hPa ack travel mm	: 400 : 700	‡	Tolerance cm3/1000 strokes Check tolerance	
oterance mm	: +- 0.05	Ī	cm3/1000s.	: 12.0
EASUREMENT		Ī	BREAKAWAY	
ressure hPa ated speed rpm	400	<u> </u>		
ack travel mm olerance mm	: 11.05	‡ 1	Rack travel in mm Rated speed rpm	
ated speed rpm		‡	Tolerance 1/min	
ressure hPa	: 200	‡		
ack travel mm olerance mm	: 11.45 : + 0.20	‡	STARTING FUEL DEL	
ressure hPa	: 300	‡	Rated speed rpm	: 100
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Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 rack travel mm 5.80 Tolerance mm : ← 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000S. 6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000S. 10.0

	TEST SPECIFICATIONS	+ Lube oil : 1409918004
Note remarks Refer to Service adjustment instru See microcard(s)		Test Lines : 1680750075 Outside diameter : 8.0
Edition Test oil	: 23.01.95 : ISO 4113	x inside diameter: 3.0 x length mm : 1000
Combination No.		REMARKS
Pump designation EP type number	: PE6P120A320LS7836 : -10 : 0412626854	
Governor Governer design. Governer no.	: RQV3001050PA1065 : -3 : 0421814142	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Cust. part No.	: 0260742802	BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : + 1.0
Customer-spec. in Customer Notor Power KW	formation : MB-NFZ : OM401 LA : 180.0	Prestroke mm : 5.55 Tolerance mm : + 0.05 test only : + 0.10
EST BENCH REQUIR	EMENTS	Rack travel in mm : 20.50 Tolerance mm : + 0.50
Test oil inlet Temp. °C Tolerance °C	: 40 : +- 2.0	Firing order : 6-3-5-2-4
verflow valve	: 1417413025	Phasing : 0-60-120-180-240 : -300
nlet press. bar olerance bar	: 1.5 : + 0.1	Tolerance : + 0.30 Check tolerance °NW : + 0.75
verflow quantity in. l/h olerance l/h		BEGINNING OF DELIVERY DIFFERENCE
est nozzle holde ssembly	: 1688901105	Time to cyl. no. : 6
pening pressure ar oterance bar	: 208.5 : +- 1.5	BASIC SETTING - Rated speed rpm : 1050

1	guide sleeve
	travel mm : 2.49
Rack travel in mm: 12.40 Tolerance mm: + 0.05	Tolerance mm : +- 0.25
Del. quantity	Rated speed rpm : 750 guide sleeve
cm3/1000 strokes : 173.0	travel mm : 4.87 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1310 guide sleeve
Check tolerance cm3/1000s. : +- 4.0	travel mm : 13.50 Tolerance mm : + 0.50
Spreed	
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance	control lever
cm3/1000s. : 9.0	position degree : - 1
2nd speed rpm : 300	Rated speed rpm : 1220
Zira speed rpiii : 500	Rack travel in mm : 11.40
Rack travel in mm: 5.80	Tolerance mm : + 1.30
Tolerance mm : + 0.30 +	
Del. quantity + cm3/1000 strokes : 19.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	FOLL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0 +-	Rated speed rpm : 1050
Check tolerance + 6.0 +	Aneroid pressure hPa : 700
Spreed	Del. quantity
Tolerance	cm3/1000 strokes : 173.0
cm3/1000 strokes : 6.0 +	Tolerance
Check tolerance	cm3/1000 strokes : + 1.0
cm3/1000s. : 10.0	Check tolerance cm3/1000S. : +- 4.0
	Spreed
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : 5.0
WITH GOVERNOR	Check tolerance
	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	RATED SPEED
guide sleeve	
travel mm : 1.13 + Tolerance mm : + 0.20	control lever
1.000	position degree : 101.0
Rated speed rpm : 1108 + guide steeve	tolerance degree : +- 4.0
travel mm : 9.81	rack travel mm : 11.40
Tolerance mm : + 0.15	Rated speed rpm : 1095
Rated speed rpm : 370	Tolerance 1/min : +- 5
guide sleeve	rack travel mm : 4.00
travel mm : 2.00 +	Rated speed rpm : 1170
Tolerance mm : + 0.25	Tolerance 1/min : +- 15
Rated speed rpm : 420	rack travel mm : 0.75

olerance mm lated speed rpm	: +- 0.75 : 1300	‡	Tolerance mm	
			Pressure hPa	: 300
IDLE			rack travel mm Tolerance mm	: 12.00 : +- 0.20
40 LL		Ŧ	TOTEL GLICE HAIL	. , 0.20
ntrol lever			START CUT-OUT	
tion degree	: 68.0	+		
erance degree	: +- 4.0	+	Rated speed rpm	: > 100
tina.		†	Check	. \ 00
sting:		1	speed 1/min Rated speed rpm	· < 220
ted speed rpm	: 300	I	Check	
k travel mm	: 5.80	1	speed 1/min	: < 240
k travel mm erance mm	: +- 0.10	+	-1/	
d speed rpm	: 200	‡	FUEL DELIVERY CHA	ARACTERISTICS
RT mm min.	: > 8.70	I	Aneroid pressure	
		+	hPa	: 700
			hPa Rated speed rpm	: 550
ITINUOUS-ACTION	I CONTROL	+	Del. quantity cm3/1000 strokes	. -
	. /00	+	cm3/1000 strokes	: 169.0
Rated speed rpm	: 400	†	Tolerance	70
		†	cm3/1000 strokes	: +- 5.0
JE CONTROL		<u></u>	Check tolerance cm3/1000s.	. +- 60
LUMINOL		I	Spreed	. • 0.0
speed rom	: 1050	I	Tolerance	
d speed rpm travel mm	: 12.40	1	cm3/1000 strokes	: 8.0
rance mm	: ← 0.05	1	Check tolerance	
		+	cm3/1000S.	: 12.0
d speed rpm travel mm rance mm	: 550	+		
k travel mm	: 12.40	+	Aneroid pressure	
rance mm	: ← 0.10	†	hPa	: -
		†	Rated speed rpm	: 500
OID/ALTITUDE			Del. quantity cm3/1000 strokes	. 170
PENSATOR TEST		I	Tolerance	. 133.0
COMPENSATOR TEST		I	cm3/1000 strokes	: +- 1.0
		1	Check tolerance	
TING		1	cm3/1000s.	: +- 4.0
		+	Spreed	
ed speed rpm	: 400	+	Tolerance	
ssure hPa		+	cm3/1000 strokes	: 8.0
k travel mm	: 12.40	†	Check tolerance	. 42.0
rance mm	: +- 0.05	‡	cm3/1000s.	: 12.0
UREMENT		<u>†</u>	BREAKAWAY	
ssure hPa	: -	I	DITTUVANT	
speed rpm	· · 400	1		
travel mm		1	Rack travel in mm	: 11.40
rance mm	: +- 0.15	1	Rated speed rpm	
		+	Tolerance 1/min	
ed speed rpm	: 400	†		
essure hPa	: 200	I		
travel mm		I	STARTING FUEL DEL	TVFRY
. WACE UKII	• • • • • • •	T	STANTANG FOLL OLL	± ¥ €(1)

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.30 Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s. : +- 6.0

Spreed

Tolerance cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.01.95 : ISO 4113

Combination No. : 0402646755

Injection pump

Pump designation : PE6P120A320LS7836-2

EP type number

: 0412626944

Governor

Governer design. : RQV300...1050PA1033

: -20

Governer no.

: 0421814140

Cust. part No. : 0260742702

Customer-spec. information

Customer

: MB-NFZ

Motor

: 0M401 LA

Power KW

: 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1417413047

Inlet press. bar

1.5

Tolerance bar

0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly

: 1688901105

Opening pressure

208.5

Tolerance bar

Lube oil

: 1409918004

Test lines

: 1680750075

Outside diameter :

8.0

x inside diameter : x length mm : 1000

3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +-

Prestroke mm

Tolerance mm

: +- 0.05

test only

: +- 0.10

Rack travel in mm : 20.50

Tolerance mm

: ← 0.50

Firing order

: 6-3-5-2-4-

: 1-

Phasing

: 0-60-120-180-240

Tolerance

: -300-360 : **←** 0.30

Check

tolerance °NW

: +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm

1050

Rack travel in mm :

12.40

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Tolerance mm : +- 0.05	- Rated speed rpm : 820
Del. quantity cm3/1000 strokes : 173.0	guide sleeve : 6.13
Tolerance cm3/1000 strokes : +- 1.0	- Tolerance mm : +- 0.25 - Rated speed rpm : 1183
Check tolerance cm3/1000s. : + 4.0	- guide sleeve - travel mm : 10.00 - Tolerance mm : + 0.25
Spreed	- Rated speed rpm : 1280
Tolerance cm3/1000 strokes : 5.0	- guide sleeve - travel mm : 11.50 - Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : 9.0	
2nd speed rpm : 300	- GUIDE SLEEVE POSITION
Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 19.0	control lever position degree : - 1 Rated speed rpm : 1150
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	- Rack travel in mm : 11.40 - Tolerance mm : +- 1.30
cm3/1000S. : + 6.0 + 5preed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 1050 Aneroid pressure
cm3/1000s. : 10.0	hPa : 700 Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVEL	Check tolerance cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 300	Tolerance cm3/1000 strokes : 5.0
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20	Check tolerance cm3/1000s. : 9.0
Rated speed rpm : 1107 guide sleeve	RATED SPEED
travel mm : 8.52 Tolerance mm : + 0.15	control lever
Rated speed rpm : 558 guide sleeve	position degree : 119.0 tolerance degree : +- 4.0
travel mm : 4.53 Tolerance mm : + 0.25	rack travel mm : 11.40 Rated speed rpm : 1095 Tolerance 1/min : +- 5
Rated speed rpm : 608 guide sleeve	Tolerance 1/min : +- 5 rack travel mm : 4.00
travel mm : 5.03 Tolerance mm : + 0.25	Rated speed rpm : 1170 Tolerance 1/min : +- 15

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rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300 LOW IDLE	Pressure hPa : 200 rack travel mm : 11.45 Tolerance mm : + 0.20 Pressure hPa : 300 rack travel mm : 12.00 Tolerance mm : + 0.20
control lever position degree : 66.0 tolerance degree : +- 4.0 Testing:	START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220
Rated speed rpm : 300 rack travel mm : 5.80 rolerance mm : + 0.10	Check speed 1/min : < 240
Rated speed rpm : 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min. : > 7.60	Aneroid pressure hPa : 700 Rated speed rpm : 550
CONTINUOUS-ACTION CONTROL	Del. quantity
Rated speed rpm : 375	cm3/1000 strokes : 169.0 Tolerance
TOROUT CONTROL	cm3/1000 strokes : + 3.0 Check tolerance
TORQUE CONTROL +	cm3/1000s. : +- 6.0 Spreed
Rated speed rpm : 1050 + rack travel mm : 12.40 + Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 550 rack travel mm : 12.40 rolerance mm : + 0.10	cm3/1000S. : 12.0 Aneroid pressure
Toterance min : 7 0.10	hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 135.0 Tolerance
	cm3/1000 strokes : +- 1.0 Check tolerance
SETTING	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 400 + Pressure hPa : 700 + rack travel mm : 12.40 + rack travel mm : 12.40	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Tolerance mm : + 0.05	cm3/1000s. : 12.0
MEASUREMENT	DDCAMALIAV
Pressure hPa : - Rated speed rpm : 400 rack travel mm : 11.05 Tolerance mm : + 0.15	Rack travel in mm : 11.40 Rated speed rpm : 1095
Rated speed rpm : 400	Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 5.80 0.30 rack travel mm Tolerance mm Del. quantity cm3/1000 strokes :

19.0 Tolerance

cm3/1000 strokes 3.0 Check tolerance

cm3/1000s. 6.0 Spreed

Tolerance

cm3/1000 strokes 6.0

Check tolerance cm3/1000s.

10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Test lines : 1680750075 Note remarks Outside diameter : 8.0 Refer to Service Info for test and x inside diameter : 3.0 adjustment instructions. x length mm : 1000 See microcard(s) W400/... : 23.01.95 Edition Test oil : ISO 4113 REMARKS Combination No. : 0402646757 Injection pump Pump designation : PE6P120A320LS7836 : -16 EP type number : 0412626854 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ Governor Governer design. : RQ300/1050PA1030-25 Governer no. : 0421801771 BEGINNING OF BELIVERY Cust. part No. : 0260743002 Test pressure bar : Tolerance bar : +- 1.0 Customer-spec. information Prestroke mm 5.55 Customer : MB-NFZ : + - 0.05Tolerance mm : 0M401 LA Motor Power KW : 200.0 : +- 0.10 test only Rack travel in mm: 20.50 TEST BENCH REQUIREMENTS Tolerance mm : \leftarrow 0.50 : 6-3-5-2-4-Firing order : 1-Test oil inlet temp. °C 40 Tolerance °C 2.0 : 0-60-120-180-240 Phasing Overflow valve : 1417413047 : -300-360 : + - 0.30Tolerance Check Inlet press. bar : : + 0.751.5 tolerance °NW Tolerance bar 0.1 Tolerance l/h : +- 10.0 BEGINNING OF DELIVERY DIFFERENCE Test nozzle holde assembly : 1688901105 Time to cyl. no. : 6 Opening pressure BASIC SETTING Tolerance bar Rated speed rpm : 1050 Lube oil : 1409918004

Rack travel in mm: 13.00 Tolerance mm: + 0.05	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Del. quantity cm3/1000 strokes : 190.0	cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000S. : 9.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance	control lever position degree : 95.0 tolerance degree : +- 4.0
cm3/1000 strokes : 5.0	rack travel mm : 12.00
Check tolerance cm3/1000S. : 9.0	Rated speed rpm : 1098 Tolerance 1/min : +- 8
2nd speed rpm : 300	rack travel mm : 4.00 Rated speed rpm : 1185
Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity	Tolerance 1/min : + 15 rack travel mm : 0.75
cm3/1000 strokes : 19.0 +	Tolerance mm : +- 0.75 Rated speed rpm : 1300
cm3/1000 strokes : + 3.0 Check tolerance	LOUIZNIZ
cm3/1000S. : + 6.0 + Spreed + Tolerance	LOW IDLE
cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	control lever position degree : 72.0 tolerance degree : +- 4.0
‡	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 415
Rated speed rpm : 600	Tolerance 1/min : + 20
Rack travel in mm : 20.00 Tolerance mm : ← 0.80	Rated speed rpm : 200
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 7.60
Rated speed rpm : 1050	TORQUE CONTROL
Aneroid pressure hPa : 800 Del. quantity	Rated speed rpm : 1050 rack travel mm : 13.00 Tolerance mm : + 0.05
cm3/1000 strokes : 190.0	Rated speed rpm : 550
cm3/1000 strokes : + 1.0 +	rack travel mm : 13.00 Tolerance mm : + 0.10

		+	Rated speed rpm : 500
ANEROID/ALTITUDE			Del. quantity cm3/1000 strokes : 127.0
COMPENSATOR TEST		‡	Tolerance cm3/1000 strokes : +- 1.0
SETTING		‡	Check tolerance cm3/1000S. : +- 4.0 Spreed
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800	+	Tolerance : 8.0 Check tolerance cm3/1000s. : 12.0
MEASUREMENT		+	PNP ALLALIAN
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 400 : 10.55 : + 0.15	† + + + +	Rack travel in mm : 12.00 Rated speed rpm : 1098 Tolerance 1/min : +- 8
Rated speed rpm	: 400	‡	Tolerance 1/min : +- 8
Pressure hPa rack travel mm Tolerance mm	: 200 : 11.40 : ← 0.20	Ī	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 12.25	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 15.0
START CUT-OUT		+	Check tolerance cm3/1000s. : +- 19.0
Rated speed rpm Check		† †	
speed 1/min Rated speed rpm Check		‡	LOW IDLE
speed 1/min	: < 240	+	Rated speed rpm : 300 rack travel mm : 5.80
FUEL DELIVERY CHA	RACTERISTICS	+	Tolerance mm : +- 0.30 Del. quantity
Aneroid pressure hPa Rated speed rpm	: 800 : 550	Ī	cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Del. quantity cm3/1000 strokes Tolerance		+	cm3/1000S. : +- 6.0 Spreed
cm3/1000 strokes Check tolerance	: +- 3.0	Ī	Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. Spreed	: +- 6.0	-	cm3/1000s. : 10.0
Tolerance cm3/1000 strokes	: 8.0	+	
Check tolerance cm3/1000s.	: 12.0	+	
Aneroid pressure hPa	: -	Ī	

M28

Note remarks Outside diameter : 8.0 Refer to Service Info for test and x inside diameter : adjustment instructions. x length mm : 1000 See microcard(s) W400/... Edition : 23.01.95 : ISO 4113 Test oil REMARKS Combination No. : 0402646758 Injection pump Pump designation : PE6P120A320LS7834 : -10 : 0412626853 (A) INJECTION PUMP SETTING VALUES EP type number Set equal delivery quant. Governor per values _____ Governer design. : RQ300/1050PA1030-24 Governer no. : 0421801770 BEGINNING OF DELIVERY Cust. part No. : 0260743302 Test pressure bar : Tolerance bar : +-Customer-spec. information Prestroke mm : MB-NFZ Tolerance mm Customer : 0M401 LA Motor Power KW : 213.0 test only : + - 0.10Rack travel in mm : 20.50 TEST BENCH REQUIREMENTS Tolerance mm : ← 0.50 Firing order : 6-3-5-2-4-Test oil inlet temp. °C Tolerance °C : 0-60-120-180-240 Phasing Overflow valve : 1417413047 : -300 Tolerance : + 0.30Check Inlet press. bar tolerance °NW : +- 0.75 Tolerance bar Tolerance L/h : +- 10.0 BEGINNING OF DELIVERY DIFFERENCE Test nozzle holde assembly : 1688901105 Time to cyl. no. : Opening pressure BASIC SETTING Tolerance bar 1050 Rated speed rpm Lube oil : 1409918004

Test Lines : 1680750075

BOSCH INJ. PUMP TEST SPECIFICATIONS

NO1

	+	guide sleeve
Rack travel in m Tolerance mm	m: 14.20 +	travel mm : 6.09 Tolerance mm : +- 0.10
TOCCI GRICE HAII	1	roterance min O. 10
Del. quantity	+	Rated speed rpm : 410
cm3/1000 strokes	: 202.0 +	guide sleeve
Tolerance	***************************************	travel mm : 4.39 Tolerance mm : + 0.10
cm3/1000 strokes	: + 1.0 I	rocerance iiiii : += 0.10
	+	Rated speed rpm : 510
Check tolerance	+	guide sleeve
cm3/1000s.	: + 4.0	travel mm : 6.00 Tolerance mm : +- 0.10
Spreed	T.	Tote: ance inti
Tolerance	+	Rated speed rpm : 1270
cm3/1000 strokes	: 5.0 +	guide steeve
Check tolerance		travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s.	: 9.0 I	Total ance han . Total
	+	Rated speed rpm : 889
2nd speed rpm	: 300 +	guide steeve
Rack travel in m	n: 7.00 ‡	travel mm : 6.26 Tolerance mm : +- 0.10
Tolerance mm	": $\leftarrow 0.30$	toter ance min . += 0.10
Del. quantity	+	
cm3/1000 strokes	: 19.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: ← 3.0 [‡]	Rated speed rpm : 600
Check tolerance	I	Rated speed rpm : 600
cm3/1000s.	: +- 6.0	Rack travel in mm : 20.00
Spreed	+	Tolerance mm : + 0.80
Tolerance cm3/1000 strokes	: 6.0	
Check tolerance	I	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 10.0	
	+	Rated speed rpm : 1050
(B) SETTING OF TH	+	Aneroid pressure
(B) SETTING OF IN	+	Aneroid pressure hPa : 800
(B) SETTING OF IN WITH GOVERNOR	+	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0
WITH GOVERNOR	WECTION PUMP	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance
	WECTION PUMP	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAV	NJECTION PUMP	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	VIECTION PUMP VEL : 300	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	VIECTION PUMP /EL : 300 : 1.78	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	VIECTION PUMP VEL : 300	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	**************************************	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	**************************************	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	**************************************	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	**************************************	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	NUECTION PUMP //EL : 300 : 1.78 : + 0.10 : 1104 : 6.69 : + 0.10	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	NJECTION PUMP //EL : 300 : 1.78 : ← 0.10 : 1104 : 6.69 : ← 0.10 : 1050	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	NJECTION PUMP /EL : 300 : 1.78 : ← 0.10 : 1104 : 6.69 : ← 0.10 : 1050 : 6.35	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 100.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	NJECTION PUMP //EL : 300 : 1.78 : ← 0.10 : 1104 : 6.69 : ← 0.10 : 1050	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	NJECTION PUMP /EL : 300 : 1.78 : ← 0.10 : 1104 : 6.69 : ← 0.10 : 1050 : 6.35 : ← 0.10	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 100.0
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	NJECTION PUMP /EL : 300 : 1.78 : ← 0.10 : 1104 : 6.69 : ← 0.10 : 1050 : 6.35 : ← 0.10	Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever position degree : 100.0 tolerance degree : + 4.0

Tolerance 1/min	: +- 8	İ	Tolerance mm	: +- 0.15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1195	1	Rated speed rpm	: 400
Tolerance 1/min	: +-'' 15	Ŧ	Pressure hPa	: 200
rack travel mm		Ŧ	Pressure hPa rack travel mm Tolerance mm	: + 0.20
Tolerance mm Rated speed rpm	1300	-	Pressure hPa	: 350
101. 751.5		 ‡	rack travel mm Tolerance mm	: +- 0.20
LOW IDLE		‡		
control lever		+	START CUT-OUT	
position degree tolerance degree		<u>†</u>	Rated speed rpm Check	: > 100
•		+	speed 1/min Rated speed rpm	: > 80
Testing:		Į	Check	
Rated speed rpm rack travel mm	: 300 : 5.70	‡	speed 1/min	: < 240
Tolerance mm	: +- 0.10	1	FUEL DELIVERY CH/	ADACTEDISTICS
rack travel mm	: 2.00	1		
rack travel mm Rated speed rpm Tolerance 1/min	: 400 : +- 20	‡	Aneroid pressure hPa	: 800
Rated speed rpm		İ	Rated speed rpm Del. quantity	: 550
		Ŧ	cm3/1000 strokes	: 197.0
CRT mm min.	: > 7.90	‡	Tolerance cm3/1000 strokes	: +- 3.0
TORQUE CONTROL		 ‡	Check tolerance cm3/1000s.	: +- 6.0
	. 1050	+	Spreed	
Rated speed rpm rack travel mm	: 14.20	‡	Tolerance cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.05	‡	Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 550 : 14.20	+	Aneroid pressure	. = -
rack travel mm Tolerance mm	: ← 0.10	Ŧ	hPa `	:
		‡	Rated speed rpm Del. quantity	: 500
ANEROID/ALTITUDE COMPENSATOR TEST		<u>†</u>	cm3/1000 strokes Tolerance	: 127.0
CONTENTION (EST		Ŧ	cm3/1000 strokes	: +- 1.0
SETTING		‡	Check tolerance cm3/1000s.	: ← 4.0
Rated speed rpm	: 400	<u>†</u>	Spreed Tolerance	
Pressure hPa	: 800	+	cm3/1000 strokes	: 8.0
rack travel mm Tolerance mm		‡	Check tolerance cm3/1000s.	: 12.0
MEASUREMENT		‡		
Pressure hPa	: -	‡	BREAKAWAY	
Rated speed rpm rack travel mm		1	Dack though in mm	17 20
I GUR LI GVEL IIIII	. 10.50	†	Rack travel in mm	1. 13.20

Rated speed rpm : 1098 Tolerance 1/min

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : **←** 15.0

Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

300 Rated speed rpm 7.00 rack travel mm Tolerance mm : + - 0.30Del. quantity cm3/1000 strokes 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 6.0

cm3/1000 strokes : Check tolerance

cm3/1000s. 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.01.95 Edition Test oil : ISO 4113

Combination No. : 0402646759

Injection pump

Pump designation : PE6P120A320LS7836

: -10

EP type number : 0412626854

Governor

Governer design. : RQV300...1050PA1033

: -19

Governer no. : 0421814137

Cust. part No. : 0260743102

Customer-spec. information Customer : MB-NFZ : 0M401 LA

Motor Power KW : 200.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar 0.1 Tolerance bar

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 1.5 Tolerance bar

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm Tolerance mm

test only : + - 0.10

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

: 6-3-5-2-4-Firing order

: 1-

Phasing : 0-60-120-180-240

: -300-360 : + - 0.30Tolerance

Check

tolerance °NW $: \leftarrow 0.75$

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm 1050

NO₅

Rack travel in mm : 13.00 Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Del. quantity cm3/1000 strokes : 190.0	Spreed Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000S. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 120.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0 - 2nd speed rpm : 300	rack travel mm : 12.00 Rated speed rpm : 1095 Tolerance 1/min : +- 5
Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 19.0	rack travel mm : 4.00 Rated speed rpm : 1175 Tolerance 1/min : + 15
Tolerance	rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300
Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	LOW IDLE
cm3/1000s. : 10.0	control lever position degree : 66.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PLIMP WITH GOVERNOR	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : + 0.10
control Lever	Rated speed rpm : 200
position degree : -1 Rated speed rpm : 1155	CRT mm min. :> 7.60
Rack travel in mm: 12.00	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 1.30	Rated speed rpm : 350
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1050 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 190.0	Rated speed rpm : 1050 rack travel mm : 13.00 Tolerance mm : +- 0.05

Rated speed rpm rack travel mm Tolerance mm	: 550 : 13.00 : ← 0.10	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 127.0 Tolerance cm3/1000 strokes : + 1.0
SETTING		(heck tolerance cm3/1000s. : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : 13.00	Spreed Tolerance cm3/1900 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
MEASUREMENT		‡
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 10.55 : + 0.15	BREAKAWAY Rack travel in mm: 12.00 Rated speed rpm: 1095 Tolerance 1/min: +- 5
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: +- 0.20 : 350 : 12.25	STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 15.0
START CUT-OUT Rated speed rpm Check		
speed 1/min Rated speed rpm Check	: < 220	LOW IDLE
speed 1/min		Rated speed rpm : 300 rack travel mm : 5.80 Tolerance mm : +- 0.30
FUEL DELIVERY CHA	RACTERISTICS	the Del. quantity cm3/1000 strokes : 19.0
Aneroid pressure hPa Rated speed rpm	: 800 : 550	+ Tolerance + cm3/1000 strokes : ← 3.0 + Check tolerance
Del. quantity cm3/1000 strokes Tolerance		cm3/1000s. : +- 6.0 + Spreed + Tolerance
cm3/1000 strokes Check tolerance		cm3/1000 strokes : 6.0 Check tolerance
cm3/1000S. Spreed Tolerance	: +- 6.0	cm3/1000s. : 10.0
cm3/1000 strokes Check tolerance		1
	: 12.0	+

BOSCH INJ. PUMP TEST Note remarks Refer to Service Interpretation : See microcard(s) W40 Edition : Test oil :	fo for test and ions.	x inside diameter x length mm	: 3.0 : 1000
Refer to Service Inadjustment instructions See microcard(s) W40	ions.	x Length mm	: 1000
adjustment instruct See microcard(s) W40	ions.		
Edition :	bu/ †	REMARKS	
Test oil :	19.01.95 ISO 4113		
Combination No. :	0402646764	(A) THIS COTTON DUME	00000000
Injection pump Pump designation : EP type number :	PE6P120A320LS7837-2 0412626943	(A) INJECTION PUMP Set equal delivery per values	quant.
Governor	20700 (405004072 47	BEGINNING OF DELIV	ERY
Governer design. : Governer no. :	0421801767	Test pressure bar Tolerance bar	: 31.0 : + 1.0
Cust. part No. :	0260742402	Prestroke mm Tolerance mm	: 5.25 : +- 0.05
Customer-spec. infor	rmation	test only	: +- 0.10
Customer : Motor : Power KW :	MB-NF2 0M441 LA 250.0	Rack travel in mm Tolerance mm	: 20.50 : +- 0.50
TEST BENCH REQUIREME	ENTS	Firing order	: 6-3-5-2-4- :1-
Test oil inlet temp. °C : Tolerance °C :	+ 40 + 2.0		: 0-60-120-180-240 : -300-360 : +- 0.30
Overflow valve :	1417413047	tolerance "NW	: ← 0.75
Inlet press. bar : Tolerance bar :	+ 0.1	BEGINNING OF DELIV	ERY DIFFERENCE
Test nozzle holde assembly :	1688901105	Time to cyl. no.	: 6
Opening pressure	208.5	BASIC SETTING	
bar : Tolerance bar :	+ 1.5	Rated speed rpm	: 550
Lube oil :	1409918004	Rack travel in mm Tolerance mm	
Test lines :	1680750075	toterance min	

Del. quantity cm3/1000 strokes :	252.0	guide sleeve travel mm : 6.00 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes :	+ 1.0	Rated speed rpm : 1280 quide sleeve
Check tolerance cm3/1000s. :	+ 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes :	5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. :	9.0	Rated speed rpm : 600 Rack travel in mm : 20.00
2nd speed rpm :	300	Tolerance mm : → 0.80
	6.20 + 0.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : Tolerance	19.0	Rated speed rpm : 550 Aneroid pressure hPa : 1100
cm3/1000 strokes : Check tolerance	+ 3.0	Del. quantity cm3/1000 strokes : 252.0
cm3/1000\$. : Spreed Tolerance	+ 6.0 +	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : Check tolerance	6.0	cm3/1000s. : +- 4.0 Spreed
cm3/1000s. :	10.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
(B) SETTING OF INJECTION WITH GOVERNOR	CTION PUMP	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL		RATED SPEED
Rated speed rpm : guide sleeve travel mm : Tolerance mm :	300 1.94 ← 0.10	control lever position degree : 100.0 tolerance degree : +- 4.0
Rated speed rpm : guide sleeve travel mm :	1104 +	rack travel mm : 14.10 Rated speed rpm : 1098 Tolerance 1/min : +- 8
Tolerance mm :	+ 0.10	rack travel mm : 4.00 Rated speed rpm : 1200
Rated speed rpm : guide sleeve	1050	Tolerance 1/min : +- 15
travel mm : Tolerance mm :	6.00 + 0.10	rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300
Rated speed rpm : guide sleeve	441	
travel mm : Tolerance mm :	4.85 ← 0.10	LOW IDLE
Rated speed rpm :	570	

		+
control lev position de tolerance d	er gree : 74.0 egree : +- 4.0	START CUT-OUT
Testing:		+ Rated speed rpm : > 10G + Check
Rated speed	rpm : 300	+ speed 1/min : > 80 + Rated speed rpm : < 220
rack travel Tolerance m	mm : 5.50	Check speed 1/min : < 240
rack travel Rated speed Tolerance 1	rpm : 400	FUEL DELIVERY CHARACTERISTICS
Rated speed	rpm : 200	+ Aneroid pressure + hPa : 1100
CRT mm min.	: > 8.50	Rated speed rpm : 1050 Del. quantity
		+ cm3/1000 strokes : 240.0
TORQUE CONTI	ROL	Tolerance cm3/1000 strokes : + 3.0
Rated speed	rpm : 550	+ Check tolerance + cm3/1000s. : +- 6.0
rack travel Tolerance m	mm : 15.10	Spreed Tolerance
		+ cm3/1000 strokes : 8.0
Rated speed rack travel Tolerance m	rpm : 1050 mm : 15.10 m : +- 0.10	Check tolerance cm3/1000s. : 12.0
		Aneroid pressure hPa : -
ANEROID/ALT		Rated speed rpm : 500 Del. quantity
COMPENSATOR	1631	+ cm3/1000 strokes : 135.0
SETTING		Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed Pressure hPa		cm3/1000S. : +- 4.0 Spreed
rack travel Tolerance m	mm : 15.10	Tolerance cm3/1000 strokes : 8.0
MEASUREMENT		+ Check tolerance + cm3/1000s. : 12.0
Pressure hPa Rated speed rack travel Tolerance mn	rpm : 400 mm : 9.15	BREAKAWAY
		Rack travel in mm: 14.10
Rated speed	·	Rated speed rpm : 1098 Tolerance 1/min : + 8
Pressure hPa rack travel	mm : 10.05	‡
Tolerance mm	: + 0.20	STARTING FUEL DELIVERY
Pressure hPa rack travel		Rated speed rpm : 100
Tolerance mm	: + 0.20	+ Del. quantity
		+ cm3/1000 strokes : 235.0

Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 6.20 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0

	1		
BOSCH INJ. PUMP TEST SPE	CIFICATIONS I	Lube oil	: 1409918004
Note remarks		- •	4 (0070000
Refer to Service Info fo	or test and	Test lines	: 1680/500/5
adjustment instructions. See microcard(s) W400/	+	Outside diameter	: 8.0
	+	x inside diameter	: 3.0
Edition : 19.0 Test oil : ISO	4113	x length mm	: 1000
Combination No. : 0402	646765	REMARKS	
Injection pump	+		
Pump designation : PE6P : -10	120A320LS7837		
EP type number : 0412	626855		
Governor	1	(A) INJECTION PUMP	
Governer design. : RQV3	001050PA797	Set equal delivery	/ quant.
: -43 Governer no. : 0421	814134 I	per values	•
	1		
02/0	7/2502	BEGINNING OF DELIV	/ERY
Cust. part No. : 0260	1/42502	Test pressure bar	• 31 0
	Ţ	Tolerance bar	: +- 1.0
Contact in factors			
Customer-spec. information	on †	Prestroke mm	. 5 25
Customer : MB-N Motor : 0M44	1 LA +	Prestroke mm Tolerance mm	: ← 0.05
Power KW : 250	.0	hant anl.	0.40
		test only	: 0.10
TEST BENCH REQUIREMENTS	+	Rack travel in mm	
	Ť	Tolerance mm	: ← 0.50
Test oil inlet	I	Firing order	: 6-3-5-2-4-
temp. °C :	40 +		: 1-
Tolerance °C : +-	2.0		
	‡		
Overflow valve : 1417	413047	Phasing	: 0-60-120-180-240
	†	Talanana	: -300-360
Inlet press. bar :	1.5	Tolerance Check	: +- 0.30
	0.1	tolerance °NW	: +- 0.75
Overflag avantities	+		
Overflow quantity min. l/h : 110	n İ	BEGINNING OF DELIV	FRY DIFFERENCE
Tolerance l/h : +-		prolimiting of pretty	EIGH DITTE ENGINEE
	+		
Test nozzle holde	<u>†</u>	Time to cyl. no.	: 6
assembly : 16889	901105 I	rime to cyt. no.	. 0
	+		
Opening pressure : 20	08.5	BASIC SETTING	
Tolerance bar : +-	1.5	Rated speed rpm	: 550
•	1		

	+	guide sleeve
Rack travel in mm Tolerance mm		travel mm : 5.03 Tolerance mm : +- 0.25
Del. quantity cm3/1000 strokes	: 252.0	Rated speed rpm : 820 guide sleeve travel mm : 6.13
Tolerance cm3/1000 strokes	: ← 1.0	Tolerance mm : +- 0.25 Rated speed rpm : 1183 guide sleeve
Check tolerance cm3/1000s.	: +- 4.0	travel mm : 10.00 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes Check tolerance	: 5.0	Rated speed rpm : 1280 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s.	: 9.0	
2nd speed rpm	: 300 ‡	GUIDE SLEEVE POSITION
Rack travel in mm Tolerance mm Del. quantity	: + 0.30	control lever position degree : - 1 Rated speed rpm : 1140
cm3/1000 strokes Tolerance	+	Rack travel in mm : 14.10
cm3/1000 strokes Check tolerance	+	Tolerance mm : + 1.30
cm3/1000S. Spreed Tolerance	: + 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: 6.0	Rated speed rpm : 550 Aneroid pressure
cm3/1000s.	: 10.0	hPa : 1100 Del. quantity
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	cm3/1000 strokes : 252.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAV	EL ‡	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm guide sleeve	: 300	Tolerance cm3/1000 strokes : 5.0 Check tolerance
travel mm Tolerance mm	: 1.29 : + 0.20	cm3/1000s. : 9.0
Rated speed rpm guide sleeve	1	RATED SPEED
travel mm Tolerance mm	: 8.54 : + 0.15	control lever position degree : 122.0
Rated speed rpm guide sleeve	: 558	tolerance degree : +- 4.0
travel mm Tolerance mm	: 4.53 : + 0.25	rack travel mm : 14.10 Rated speed rpm : 1095 Tolerance 1/min : +- 5
Rated speed rpm	: 608	Tolerance 1/min : +- 5

rack travel mm Rated speed rpm Tolerance 1/min	: 1190	†	Rated speed rpm	
rack travel mm Tolerance mm Rated speed rpm	: ← 0.75	+	Pressure hPa rack travel mm Tolerance mm	: 150 : 10.05 : + 0.20
LOW IDLE	. 1300		Pressure hPa rack travel mm Tolerance mm	: 13.85
control lever position degree		† + +	START CUT-OUT	
tolerance degree Testing:	: 4.0	‡	Rated speed rpm Check speed 1/min Rated speed rpm	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.50 : ← 0.10	‡	Check speed 1/min	
Rated speed rpm	: 200	‡	FUEL DELIVERY CHA	ARACTERISTICS
CRT mm min.	: > 8.60	‡	Aneroid pressure	: 1100
CONTINUOUS-ACTION	N CONTROL	+	Rated speed rpm Del. quantity cm3/1000 strokes	: 1050
Rated speed rpm	: 350	‡	Tolerance cm3/1000 strokes	: +- 3.0
TORQUE CONTROL			Check tolerance cm3/1000s. Spreed	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 15.10 : ← 0.05	+	Tolerance cm3/1000 strokes Check tolerance	: 8.0
Rated speed rpm rack travel mm Tolerance mm	: 1050	‡	cm3/1000S. Aneroid pressure	
ANEROID/ALTITUDE		 	hPa Rated speed rpm Del. quantity cm3/1000 strokes	
COMPENSATOR TEST		Ī	Tolerance cm3/1000 strokes	: ← 1.0
SETTING		<u> </u>	Check tolerance cm3/1000s. Spreed	: +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1100 : 15.10	+	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
MEASUREMENT	. , ,,,,,	Ī	CIID/ 10003.	. 12.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 400 : 9.15 : + 0.20	+++++++++++++++++++++++++++++++++++++++	BREAKAWAY Rack travel in mm Rated speed rpm	
		•		

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/100GS. : +- 24.0

LOW IDLE

Rated speed rpm 300 6.20 rack travel mm 0.30 Tolerance mm

Del. quantity cm3/1000 strokes

Tolerance

19.0

cm3/1000 strokes 3.0

Check tolerance

cm3/1000S. 6.0 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

BOSCH INJ. PUMP T	EST SPECIFICATIONS ‡	Lube oil : 1409918004
Note remarks	‡	Test lines : 1680750075
Refer to Service adjustment instru See microcard(s)	Info for test and ctions.	Outside diameter : 8.0 x inside diameter : 3.0
Edition Test oil	: 19.01.95 : ISO 4113	x length mm : 1000
Combination No.	: 0402646766	REMARKS
EP type number Governor	: RQ300/950PA993-11	(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
Cust. part No.	†	BEGINNING OF DELIVERY Test pressure bar : 31.0 Tolerance bar : + 1.0
Customer—spec. in Customer Motor Power KW	: MB-NFZ : OM441 LA	Prestroke mm : 5.25 Tolerance mm : + 0.05 test only : + 0.10
TEST BENCH REQUIR	EMENTS	Rack travel in mm : 20.50 Tolerance mm : +- 0.50
Test oil inlet temp. °C Tolerance °C	: 40 : + 2.0	Firing order : 6-3-5-2-4- : 1-
Overflow valve	: 1417413047	Phasing : 0-60-120-180-240 : -300-360
Inlet press. bar Tolerance bar	:	Tolerance : +- 0.30 Check tolerance °NW : +- 0.75
Overflow quantity min. l/h Tolerance l/h	: 110 : + 10.0	BEGINNING OF DELIVERY DIFFERENCE
Test nozzle holde assembly	: 1688901105	Time to cyl. no. : 6
Opening pressure bar Tolerance bar	: 208.5 : ← 1.5	BASIC SETTING Rated speed rpm : 550

Rack travel in mm Tolerance mm	: 15.10 : + 0.05	guide sleeve travel mm : 3.46 Tolerance mm : +- 0.10
Del. quantity cm3/1900 strokes	: 252.0	Rated speed rpm : 580 guide sleeve travel mm : 6.00
Tolerance cm3/1000 strokes	: + 1.0	Tolerance mm : +- 0.10
Check tolerance cm3/1000s.	: + 4.0	Rated speed rpm : 1190 guide sleeve travel mm : 11.50
Spreed Tolerance cm3/1000 strokes	: 5.0	Tolerance mm : + 0.50 GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm : 600
2nd speed rpm	: 300	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
Rack travel in mm Tolerance mm Del. quantity	: 6.20 : + 0.30	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 19.0	Rated speed rpm : 550
Tolerance cm3/1000 strokes	: + 3.0	Aneroid pressure hPa : 1100
Check tolerance cm3/1000s. Spreed	: +- 6.0	Del. quantity cm3/1000 strokes : 252.0 Tolerance
Tolerance	Ţ	cm3/1000 strokes : +- 1.0
cm3/1000 strokes Check tolerance cm3/1000s.	+	Check tolerance cm3/1000s. : + 4.0
CIID7 10003.	: 10.0	Spreed Tolerance cm3/1000 strokes : 5.0
(B) SETTING OF INJ	JECTION PUMP	Check tolerance
WITH GOVERNOR	<u> </u>	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVE	Ī	RATED SPEED
Rated speed rpm	: 300	control lever
guide sleeve travel mm	: 2.28 I	position degree : 100.0
Tolerance mm	: ← 0.10 <u>†</u>	tolerance degree : +- 4.0
Rated speed rpm guide steeve	: 1005	rack travel mm : 14.10 Rated speed rpm : 998
travel mm Tolerance mm	: 6.34 : ← 0.10	Tolerance 1/min : + 8
Rated speed rpm	: 950	rack travel mm : 4.00 Rated speed rpm : 1105
guide sleeve	+	Tolerance 1/min : +- 15
travel mm Tolerance mm	: 6.00 : + 0.10	rack travel mm : 0.75
Rated speed rpm	: 340	Tolerance mm : +- 0.75 Rated speed rpm : 1300
	•	

		+	rack travel mm : 13.85
OW IDLE		+	Tolerance mm : +- 0.20
		‡	START CUT-OUT
control lever cosition degree colerance degree		+	Rated speed rpm : > 100 Check
esting:	7,0	‡	<pre>speed 1/min : > 80 Rated speed rpm : < 220</pre>
ated speed rpm ack travel mm olerance mm	: 300 : 3.50 : + 0.10	‡	Check speed 1/min : < 240
		Ī	FUEL DELIVERY CHARACTERISTICS
ack travel mm ated speed rpm olerance 1/min	: 340	‡	Aneroid pressure hPa : 1100
		Ŧ	Rated speed rpm : 950
ated speed rpm		Ŧ	Del. quantity cm3/1000 strokes : 240.0
RT mm min.	: > 0.50	<u> </u>	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
DRQUE CONTROL		I	cm3/1090s. : +- 6.0 Spreed
ated speed rpm ack travel mm olerance mm	: 15.10	+	Tolerance cm3/1000 strokes : 8.0 Check tolerance
		Ŧ	cm3/1000s. : 12.0
ated speed rpm ack travel mm olerance mm	: 950 : 15.10 : + 0.10	‡	Aneroid pressure hPa : -
			Rated speed rpm : 500 Del. quantity
NEROID/ALTITUDE OMPENSATOR TEST		Ţ	cm3/1000 strokes : 135.0 Tolerance
		‡	cm3/1000 strokes : + 1.0 Check tolerance
TTING		<u>‡</u>	cm3/1000s. ; +- 4.0
ated speed rpm ressure hPa ack travel mm	: 400 : 1100 : 15.10	<u> </u>	BREAKAWAY
ck travel mm lerance mm	: ← 0.05	1	Pack travel in mr. 1/ 10
EASUREMENT		Ţ	Rack travel in mm : 14.10 Rated speed rpm : 998 Tolerance 1/min : +- 8
ressure hPa ated speed rpm	400	+	•
ick travel mm Lerance mm	: 9.15 : ← 0.20	‡	STARTING FUEL DELIVERY
ted speed rpm	: 400	‡	Rated speed rpm : 100
essure hPa ck travel mm		Ŧ	Del. quantity cm3/1000 strokes : 235.0
lerance mm		‡	Tolerance cm3/1000 strokes : + 20.0 Chash tolerance
essure hPa	: 550	Ţ	Check tolerance cm3/1000s. : +- 24.0
0			

LOW IDLE

Rated speed rpm	:		300
rack travel mm	:		6.20
Tolerance mm	:	+-	0.30
Del. quantity			
cm3/1000 strokes	:		19.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000S.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		6.0
Check tolerance			
cm3/1000S.	:		10.0

rest oil inlet temp. °C : 40		EST SPECIFICATIONS	Test lines : 1680750075
x length mm : 1000	Note remarks		Outside diameter : 8.0
Combination No. : 0402646767	adjustment instru	ctions.	x inside diameter: 3.0 x length mm : 1000
Injection pump Pump designation : PE6P120A320LS7837 : -10 EP type number : 0412626855 Set equal delivery quant. Governor Governer design. : RQV300950PA797 : -42 Governer no. : 0421814133 Cust. part No. : 0260741502 Customer—spec. information Customer : MB-NFZ thorough : -250.0 Customer will be recommanded in the composition of	Edition Test oil	: 19.01.95 : ISO 4113	REMARKS
Pump designation : PE6P120A320LS7837 : -10 EP type number : 0412626855	Combination No.	: 0402646767	†
Sovernor Sovernor	Pump designation	: -10	+ Set equal delivery quant.
Test pressure bar : 31.0 Tolerance bar : + 1.0 Tolerance bar : + 1.0 Prestroke mm : 5.25 Tolerance mm : + 0.05 Tolerance mm : + 0.05 Tolerance mm : + 0.10 Test only : + 0.10 Rack travel in mm : 20.50 Tolerance mm : + 0.50 Test BENCH REQUIREMENTS Firing order : 6-3-5-2- :1- Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Test oil inlet Tolerance or : + 0.30 Tolerance or : + 0.50 Tolerance or : + 0.50 Tolerance or : + 0.50 Tolerance or : + 0.50 Tolerance or : + 0.50 Tolerance or : + 0.50 Tolerance or : -	Governer design.	: -42	
Customer spec. information Customer : MB-NFZ			Test pressure bar : 31.0 Tolerance bar : +- 1.0
Test oil inlet Tolerance °C : 40 Tolerance : + 0.30 Tolerance : + 0.30 Tolerance °NW : + 0.75 Test oil inlet Tolerance in the period of the color of the colo	Customer-spec. in	formation : MB-NFZ	+
rest oil inlet temp. °C : 40 Tolerance °C : + 2.0 Overflow valve : 1417413047 Inlet press. bar : 1.5 Tolerance bar : + 0.1 Test nozzle holde par : 208.5 Tolerance bar : + 1.5 Reflow valve : 1688901105 Time to cyl. no. : 6 Reflow valve : 208.5 Tolerance bar : + 550	1otor Power KW	: OM441 LA : 250.0	Rack travel in mm: 20.50
Tolerance °C : 40 Folerance °C : + 2.0 Phasing : 0-60-120-180-24 : -300-360 Tolerance : + 0.30 Check tolerance °NW : + 0.75 Folerance bar : + 0.1 Fest nozzle holde assembly : 1688901105 Folerance bar : 208.5 Folerance bar : + 1.5 Rated speed rpm : 550		EMENTS	
Check tolerance "NW : + 0.75 Inlet press, bar : 1.5 Folerance bar : + 0.1 Fest nozzle holde assembly : 1688901105 Check tolerance "NW : + 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 6 Check tolerance "NW : + 0.75 BEGINNING OF DELIVERY DIFFERENCE Time to cyl. no. : 6 BASIC SETTING Folerance bar : + 1.5 Rated speed rpm : 550	temp. °C	:	÷ : -300-360
Test nozzle holde assembly : 1688901105			+ Check
pening pressure i 208.5 Time to cyl. no. : 6 BASIC SETTING Rated speed rpm : 550	inlet press, bar Tolerance bar	: 1.5 : + 0.1	BEGINNING OF DELIVERY DIFFERENCE
par : 208.5 + BASIC SETTING Folerance bar : + 1.5 + Rated speed rpm : 550	assembly	: 1688901105	Time to cyl. no. : 6
ube oil : 1409918004 + Rated speed rpm : 550	ar		+
	ubo ošl	- 1409918004	T Rated Speed rpm : 330

Tolerance mm : + 0.05	Rated speed rpm : 780
Del. quantity cm3/1000 strokes : 252.0	guide sleeve travel mm : 6.31 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1092
Check tolerance cm3/1000s. : + 4.0	guide sleeve : 10.00 + travel mm : 10.00 + Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 5.0	Rai od speed rpm : 1190 guide steeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9.0	
2nd speed rpm : 300	+ GUIDE SLEEVE POSITION
Rack travel in mm: 6.20 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 19.0	control lever position degree : -1 Rated speed rpm : 1040
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	Rack travel in mm : 14.10 Tolerance mm : + 1.30
cm3/1000S. : +- 6.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 550 Aneroid pressure
cm3/1000s. : 10.0	hPa : 1100 - Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- cm3/1000 strokes : 252.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance
travel mm : 1.29 Tolerance mm : + 0.20	cm3/1000s. : 9.0
Rated speed rpm : 1009 guide sleeve	RATED SPEED
travel mm : 8.55 Tolerance mm : + 0.15	control lever
Rated speed rpm : 567 guide sleeve	position degree : 122.0 tolerance degree : +- 4.0
travel mm : 4.66 Tolerance mm : + 0.25	rack travel mm : 14.10 Rated speed rpm : 995
Rated speed rpm : 617 guide sleeve	Tolerance 1/min : +- 5 rack travel mm : 4.00
travel mm : 5.23 Tolerance mm : +- 0.25	+ rack travel mm : 4.00 + Rated speed rpm : 1100 + Tolerance 1/min : +- 15

rack travel mm Tolerance mm Rated speed rpm	: 0.70 : + 0.70 : 1200	Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 10.05 : + 0.20
LOW IDLE		Tolerance mm	: + 0.20
control lever position degree tolerance degree Testing:	: 85.0 : + 4.0	START CUT-OUT Rated speed rpm Check speed 1/min	; > 80
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.50 : + 0.10	Rated speed rpm Check speed 1/min	
Rated speed rpm	: 200	FUEL DELIVERY CH	MARACTERISTICS
CRT mm min.	: > 8.50	Aneroid pressure hPa Rated speed rpm	: 1100
CONTINUOUS-ACTION	CONTROL	+ Del. quantity	
Rated speed rpm	: 325	cm3/1000 strokes Tolerance cm3/1000 strokes	-
TORQUE CONTROL		Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 15.10 : +- 0.05	Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 950 : 15.10 : + 0.10	Aneroid pressure hPa Rated speed rpm	:
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 135.0
SETTING		+ Check tolerance + cm3/1000s.	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 400 : 1100 : 15.10	Spreed Tolerance cm3/1000 strokes Check tolerance	
Tolerance mm	: + 0.05	cm3/1000s.	: 12.0
MEASUREMENT		BREAKAWAY	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 9.15 : ← 0.20	Rack travel in m Rated speed rpm Tolerance 1/min	: 995
and the second second		‡	

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes :

235.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

300 Rated speed rpm 6.20 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance cm3/1000 strokes :

6.0

Check tolerance cm3/1000s.

10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.11.94 Test oil : ISO 4113

Combination No. : 0402646880

Injection pump

Pump designation : PE6P12DA72ORS7126

: -10

EP type number : 0412626929

Governor

Governer design. : RQV200...1050PA725

: -5

Governer no. : 0421813814

Cust. part No. : 1120969

Customer—spec. information Customer : SCANIA Motor : DS 11

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 : -300

Tolerance : \leftarrow 0.30

Check tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 235.0	Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance		- Check tolerance
cm3/1000 strokes	: +- 1.0	cm3/1000S. : 9.0
Check tolerance cm3/1000s.	: +- 4.0	RATED SPEED
Spreed		
Tolerance cm3/1000 strokes	: 6.0	control lever position degree : 62.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s.	: 9.0	- control lever
2nd speed rpm	: 225	position degree : 117.0 tolerance degree : +- 4.0
Rack travel in mm		rack travel mm : 13.10
Tolerance mm	: +- 0.30	- Rated speed rpm : 1095
Del. quantity cm3/1000 strokes	. 17.0	Tolerance 1/min : +- 5
Tolerance		rack travel mm : 4.00
cm3/1000 strokes		- Rated speed rpm : 1215
Check tolerance cm3/1000s.	: + 4.0	Tolerance 1/min : + 15
Spreed	. 1- 4.0	rack travel mm : 0.50
Tolerance	4	Tolerance mm : +- 0.50
cm3/1000 strokes	: 3.0	- Rated speed rpm : 1320
Check tolerance cm3/1000s.	: 6.0	
CIIS/ 10005.	. 0.0	- LOW IDLE
		-
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	-
WITH GOVERNOR	Ī	- control lever - position degree : 64.0
		- tolerance degree : +- 4.0
		•
GUIDE SLEEVE POSI	TION	- control lever - position degree : 10.0
	Ţ	tolerance degree : +- 4.0
control lever	+	•
position degree Rated speed rpm	: -1	- Testing:
rated speed rpm	1200	- Rated speed rpm : 225
Rack travel in mm		- rack travel mm : 4.60
Tolerance mm	: ← 2.50 +	Tolerance mm : $+$ 0.30
EIN LOAD DELTHED	Y AT FULL LOAD STOP	- Rated speed rpm : 100
TOLL LOND DELIVER	TALFOLL LOAD STOP	- CRT mm min. : > 6.10
Rated speed rpm Aneroid pressure	1	
hPa	: 900	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes Tolerance	: 235.0	Rated speed rpm : 300
cm3/1000 strokes	: + 1.0 I	
Check tolerance	+	TORQUE CONTROL
cm3/1000s.	: +- 4.0 +	•

Rated speed rpm	: 700 : 14.15	<u> </u>
rack travel mm Tolerance mm	· + 0.05	- BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 14.15	Rack travel in mm : 13.10 Rated speed rpm : 1095 Tolerance 1/min : +- 5
ANEROID/ALTITUDE COMPENSATOR TEST		STARTING FUEL DELIVERY
SETTING		Rated speed rpm : 100 rack travel mm : 20.50
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 500 : 900 : 14.15 : + 0.05	Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 300.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance
Pressure hPa Rated speed rpm rack travel mm	: 10.70	cm3/1000s. : +- 24.0
Tolerance mm Rated speed rpm		LOW IDLE
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.05 : + 0.05	Rated speed rpm : 225 rack travel mm : 4.60 Tolerance mm : + 0.30 Del. quantity
Pressure hPa rack travel mm Tolerance mm	: 11.20	- cm3/1000 strokes : 17.0 - Tolerance - cm3/1000 strokes : + 2.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed
FUEL DELIVERY CHA	RACTERISTICS	Tolerance - cm3/1000 strokes : 3.0 - Check tolerance
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 226.0 : ← 4.0 : ← 6.0 : - : 500 : 152.0	cm3/1000s. : 6.0